Anglo-Saxon medicine within its social context

by

Helen M. Cayton

Thesis submitted for the degree of Doctor of Philosophy at the University of Durham

1977

CONTAINS

PULLOUTS

Abstract

Anglo-Saxon medicine within its social context

This thesis considers the medical history of the Anglo-Saxons, and utilises all available sources of evidence, whether documentary, archaeological or medical, in an attempt to gain a comprehensive view of the medical aspects of society.

The medical knowledge of the Anglo-Saxons was derived mainly from late Classical medicine, and the transmission of Classical sources into Anglo-Saxon medical texts is considered briefly. The resulting medical theories are an uneasy fusion of Classical doctrines such as the four humours, and pagan Teutonic ideas such as the worm and elfshot as carriers of disease. These theories are discussed at some length in a separate chapter.

The herbs and other ingredients used in remedies are analysed, and the relatively small group of herbs which forms the nucleus of the pharmacopeia is isolated and examined in detail.

Other chapters consider social aspects of medicine, such as the growth and status of the medical profession, the treatment of those within the community who suffered from mental illness, and the reactions of society to the recurrent epidemics, famines and other disasters which afflicted them.

The final two chapters consider the scientific evidence, which is mainly derived from palaeopathology, and attempt to relate it to other sources of information. Palaeopathological reports on skeletal groups from various Anglo-Saxon sites have provided basic information such as sex, height, age at death and so on, and evidence for any disease which affects bone structure such as leprosy, tuberculosis, gout or osteoarthritis. But they record beside more subtle changes reflecting diet, occupation, social conditions and general way of life. Palaeopathology can thus be used to complement the documentary and archaeological evidence while adding new information as well, and so helps to place Anglo-Saxon medicine within its social context.

****

Table of Contents

List of Tables and Figures

List of Illustrations

Abbreviations

B	Beccaria A., I Codici de Medicina del Periodo Presalernitano, (Rome, 1956)
Bonser	Bonser W., The medical background of Anglo-Saxon England (1963)[1]
D.T.R.	De Temporum Ratione, Ed. C.W. Jones, Bedae: Opera de Temporibus (Cambridge, Mass., 1943)
E.E.T.S.	Early English Text Society
E.H.D.	English Historical Documents
Grattan + Singer	Grattan J.H.G. + Singer C., Anglo-Saxon magic and medicine (1952)
Grieve	Grieve Mrs M., A Modern Herbal (1931; reprint 1976)
Grigson	Grigson G., The Englishman's Flora (St. Albans, 1975)
H.A.A.	Historia abbatum auctore anonymo, ed. C. Plummer, Bedae: Opera historica, 2 vols. (Oxford, 1896)
H.A.B.	Historia abbatum auctore Beda, ed. C. Plummer op.cit.
H.E.	Historia ecclesiastica gentis Anglorum ed. C. Plummer op.cit.
Ker	Ker N., Catalogue of Manuscripts containing Anglo-Saxon (Oxford, 1957)
Lacn.	Lacnunga, ed. Grattan + Singer, op.cit.
Lbk.	Leechbook, I, II or III. ed. T.O. Cockayne, Leechdoms, wortcunning and starcraft of early England Vol. II (1864-6)
M. de Q.	Medicina de Quadrupedibus of Sextus Placitus, ed. Cockayne, op.cit. Vol. I
ps.A.	pseudo Apuleius, Herbal, ed. Cockayne, op.cit. Vol. I
P.L.	Patrologiae cursus completus. Patrologia latina, ed. J.P. Migne, 221 vols (Paris, 1844-64)
Talbot	Talbot C.H., Medicine in Medieval England (1967)
V.A.	Vita sancti Cuthberti auctore anonymo, ed. B. Colgrave, Two Lives of St. Cuthbert (Cambridge, 1940)
V.P.	Vita Sancti Cuthberti prosaica auctore Beda, ed. Colgrave, op.cit.

1 Place of publication of all books cited, here and throughout, is London unless otherwise stated.

Declaration

I hereby declare that none of the material in this thesis has previously been submitted for a degree in this or any other university.

Copyright

Acknowledgements

In writing a multi-disciplinary thesis such as this, I have inevitably sought advice from many different sources, and I am very grateful to all those who have taken the time and trouble to help me.

I owe an especial debt of gratitude to two people: to my supervisor Professor Rosemary Cramp, for allowing me to start on the subject in the first place, and to Dr Calvin Wells, who introduced me to the wonders and intricacies of palaeopathology, and who gave up an inordinate amount of his time and energy to answer my importunate queries, and generally encourage my work.

I would also like to thank the following people for help of various kinds: D.R. Brothwell; my father, Dr H.R. Cayton; Professor P. Clemoes; Mrs Alison Donaldson; Miss Glynis Foster; Miss Barbara Harbottle; Miss Wendy Hudson; Tom Middlemass; Professor J.D.A. Ogilvy; James Rackham; Dr C.H. Talbot; Mrs Marie Trippett.

Finally I wish to thank my typist, Miss Elizabeth Gibson for the speedy, efficient and generally uncomplaining manner in which she has typed my manuscript.

INTRODUCTION

The purpose of this thesis is to consider Anglo-Saxon medicine within the context of its time, and the social and cultural background within which it operated. This has involved taking a rather broader view of medicine than is often the case, since in this sense birth, death and most of life in between all have medical aspects. Such factors as living conditions, working conditions, diet and climate have an influence on health, and are thus worthy of consideration in a study of medicine and its attempts to deal with ill health and understand its causes.

Most of the previous work on Anglo-Saxon medicine has concentrated on the historical sources and on the medical texts in particular. The principal medical texts in Old English were edited and translated by T.O. Cockayne[1] as part of the Rolls series in the 1860's, and these have formed the basis of all subsequent research. Work on the origins and transmission of these texts from late Classical and other sources was begun by Charles Singer in the 1920s,[2] but his rather outmoded and dogmatic views are now being considerably modified and extended by the scholarly and detailed researches of Charles Talbot.[3]

A general survey of the whole period and covering all aspects of medicine was attempted by Wilfrid Bonser,[4] though

---

1. Leechdoms, wortcunning and starcraft of early England, 3 vols, (Rolls series) 1864-6
2. See e.g. "The herbal in antiquity and its transmission to later ages" J. Hellenic Studies 47 (1927) 1-52 Also J.H.G. Grattan + C. Singer, Anglo-Saxon magic and medicine (1952)
3. "Some notes on Anglo-Saxon medicine" Medical History 9 (1965) 156-169; C.H. Talbot Medicine in medieval England (1967)
4. The medical background of Anglo-Saxon England (1963)

his sources were almost entirely literary, archaeology being given only a passing mention.

The most recently published work is by Stanley Rubin,[5] and incorporates some palaeopathological and archaeological material. But since it was written as a general work, and covers the period to the beginning of the fourteenth century rather than just the Anglo-Saxon period, it is inevitably rather superficial in its judgements.

There thus seems some justification for a new approach to Anglo-Saxon medicine, especially one which utilises all forms of information, whether documentary, archaeological or medical, and attempts to collate the material together in order to reach new conclusions. Pathological reports on the skeletons from Anglo-Saxon cemeteries have been little used before and there has been no previous attempt to relate them directly to the literary evidence or to the medical texts.[6] In many cases the various sources of evidence are complementary and illuminating, but at times they directly conflict, as for instance, when considering the information concerning the average age at death.[7] In this situation I have considered the reasons for the conflict, and suggested a compromise solution. In other cases merely to identify areas of dispute can point the way to further research.

Most earlier research on Anglo-Saxon medicine has been concerned to establish its position as a link in the chain of medical knowledge which extends back into the Classical period and beyond, and forwards into the modern period.

---

5. Medieval English Medicine (Newton Abbot, 1974)
6. See particularly Chapter 9
7. See Chapter 8

This survey has concentrated more on the use made by the Anglo-Saxons themselves of the medical knowledge they possessed. It thus considers the numbers and types of herbs described in the texts and the kind of remedies for which they were prescribed. Whenever possible the medical action (if any) of the herbs has also been considered, but since research on the medical properties of plants has only commenced fairly recently after a long period of neglect,[8] it has proved impossible to develop this very far. The conclusions of this research are included in chapter four, but as no analysis of the total number of herbs used in Anglo-Saxon medicine has previously been attempted, the data on which it is based are included in an appendix as a new body of evidence.

The general literary and documentary sources have been read in the original where possible, but have been quoted in translation in the main body of the text. This is because incidents involving healing miracles, descriptions of epidemics, and so on are often described at some length, and quoting them in the original Latin or Old English seems rather unwieldy. For the sake of comparison the originals are included in an appendix at the end.

The palaeopathological material included in the thesis is based on the available published information up to 1975, and on much unpublished material supplied by Calvin Wells. As will be seen, the chapter which considers this evidence quotes mainly from reports by Wells, rather than from other

---

8. See W.A.R. Thompson, Herbs that Heal (1976)

authors.[9] There are a number of reasons for this. One is that Wells has examined large quantities of material, so that it is possible to analyse and compare information from various sites, all of which have been assessed by identical criteria and examined by the same pathologist. The groups of skeletons on which he has reported have also been relatively large ones so that the sample numbers are statistically sound; and the sites themselves are both temporarily and geographically spread throughout the Anglo-Saxon period. They include the seventh century monastic foundations of Monkwearmouth and Jarrow in Northumbria; a seventh-ninth century nunnery at Iona, and late Saxon sites at North Elmham, and Red Castle, Thetford in East Anglia.

Since Calvin Wells is also a medically trained pathologist his reports provide much more detailed medical information than those of any other investigator, and are of great value to this kind of study. The other published material has been taken into account in writing chapter nine, though not actually quoted, but in general it added little supplementary information.

Such a broad survey is inevitably superficial in some areas, and draws heavily on the work of others, since it would be impossible to be a specialist at all the technical disciplines involved. The chapter on the medical texts, for instance, is based mainly on work by Talbot, and does not try to duplicate his research on the sources available to the Saxons, nor to consider the Continental parallels. Other aspects, such as the magical and pagan elements in

---

9. See Chapter 9

medicine have been largely ignored, because they have already been considered at length by Bonser, and given undue prominence in his work. Their absence is partly an effort to redress the balance.

In general the attempt to use all available sources of evidence, has proved fruitful and interesting, and it is hoped that this analysis has contributed a little more to the understanding of Anglo-Saxon medicine.

CHAPTER 1: THE NATURE OF THE EVIDENCE

The sources available for a study of Anglo-Saxon medicine fall into three main categories. Firstly there are the medical texts themselves, which are written almost entirely in the vernacular, and are based on late Classical compilations from earlier material. Secondly, there is the general literature of the period, - chronicles, histories, lives of saints, laws, penitentials and so on, which can sometimes be amplified by archaeological evidence; and thirdly there are the modern scientific disciplines, palaeopathology, pharmacology, and historical demography, which have all added new information.

The Medical Texts

Of these sources the most important are the medical texts. The principal surviving texts are:

(1) The Herbarium of pseudo-Apuleius, with a continuation from the work of Dioscorides. One hundred and eighty-five herbs and their uses are described in the text.

(2) The Medicina de Quadrupedibus of Sextus Placitus, which contains remedies based on various animals. This text is always found in association with the Herbal of ps. Apuleius in English manuscripts.

(3) The Leechbook of Bald, which consists of two books of remedies, one dealing with external disorders and the other with internal disorders. The only surviving manuscript of the complete text (B.M. Royal 12D xvii) also contains a third Leechbook in a similar style, which presumably was originally a separate work.

(4) The Lacnunga, a commonplace book of remedies and charms, which has a much larger magical element than any of the

other texts.

(5) The Peri Didaxeon, a late text, similar to the first Leechbook, and based in part on the same material.

All these texts are in Old English translations, but there also survive a Latin text of Hippocrates' de mulierum affectibus, occurring only in a late eleventh century manuscript (Sloane 475) but probably known in England before this,[1] and various short tracts in Latin and Old English on topics such as blood-letting, the Egyptian Days, diet, and the signs of pregnancy.[2]

The origins of these texts and their position in Western European medicine will be discussed in the next chapter. The significance of their contents in general terms is that they show the kind of remedies and medicine used by Anglo-Saxons; the techniques employed, such as poulticing, heat treatment, blood-letting etc; the general approach and attitudes to disease, and the attempts to understand disease causation and to chart its course.

The most notable thing about the medical manuscripts is that they show an extensive knowledge of herbs. Most of the remedies involve the use of herbs, either made up into a drink with wine, ale, or other liquids or applied to the affected part as a poultice. It has been estimated that about 500 English names of plants were in use in the Anglo-Saxon period.[3] Some herbs were obtained from Mediterranean sources, for example, cumin[4] and cinnamon,[5]

---

1. See Chapter 2,
2. See Chapter 2, p. 47
3. J.F. Payne, English Medicine in Anglo-Saxon Times (Oxford, 1904) pp. 81-2; see also Chap. 4

and were probably imported, whereas others, such as githrife[6] or corn cockle (Agrostemma githago) seem to derive from a native herbal tradition.

The remedies themselves vary from the extremely simple, such as the following for erysipelas: "Take savine. Rub to dust and mix with honey and smear therewith";[7] to the complex, such as a remedy for a "fiend sick man", which involves the use of fourteen ingredients made up into a drink with clear ale. Seven masses are then to be sung over the herbs, "and drip the drink into every drink which he will subsequently drink, and let him sing the psalm Beati immaculati and Exurgat and Salvum me fac, deus, and then let him drink the drink out of the church bell, and let the mass priest after the drink sing this over him, Domine, sancte pater omnipotens".[8]

This remedy shows very clearly the close link between religion and medicine in the Anglo-Saxon period, - the use of the church bell, and the presence of the priest to say masses over the herbs and to bless the sick man being noticeable. In general the Christian elements, or sometimes only semi-Christianised elements, are most prominent in remedies such as this one for madness, where conventional medical treatment is likely to be least effective, and another more potent power needs to be invoked.

---

4. Lbk. II xliv; Lacn. lxxi. All references to texts refer to T.O. Cockayne, Leechdoms, wortcunning and starcraft of early England 3 vols. (1864-6), except for the Lacnunga which is quoted from the edition of J.H.G. Grattan + C. Singer, Anglo-Saxon Magic and Medicine (1952)
5. Lbk. I vi, 6; Lacn. xxx
6. Lbk. I i, 5; Lacn. xl
7. Lacn. c; also Lbk. Ixxxix 3b
8. Lbk. I lxiii

A good deal of the medical literature seems to consist of little more than long lists of remedies for various conditions, but on occasions, and particularly in the Leechbooks, there are attempts at diagnosis, and groups of symptoms are given.

> "Again for that, a manifold token and a leechdom for the neck ratten or jowl swelling or wesand.
> The disease is of two kinds; the one is in the jowl, and when one openeth the mouth it is both swollen and is red about the uvula; and the man cannot easily breathe, but will be smothered, he cannot also swallow aught nor speak well, nor hath he voice; this disorder, however, is not dangerous.
> Another sort is when there is a swelling in the throat and purulence, he may not speak aught, and the swelling is both on the neck and on the tongue; the man cannot breathe nor turn his neck nor lean forward his head so that he may see his navel; and except one attend to him somewhat speedily, in about three days he will be deceased." 9

After this piece of differential diagnosis the text continues with the remedies to be applied, and instructions on the diet for the sick man.

Elsewhere in the same Leechbook the doctor is advised to consider the strength and age of his patients before applying any remedies, and to modify the remedies if necessary.

> "Observe always when thou art applying the strong leechdoms, what the power be, and what the nature of the body of the patient; whether it be strong and hardy, and easily may bear the strong leechdoms, or whether it be nice and tender and thin, and may not bear the leechdoms. Apply the leechdoms according as thou seest the state of the body. For a mickle difference is there, in the bodies of a man, a woman, and a child; and in the main or constitution of a daily wright or labourer and of the idle, of the old and of the young, of him who is accustomed to endurances, and him who is unaccustomed to such things." 10

---

9. Lbk. I iv, 4
10. Lbk. I xxxv

Other passages similar to these two quoted above suggest that the Anglo-Saxons were capable of understanding the significance of symptoms and groups of symptoms and modified the treatment of the patient accordingly. This has not always been appreciated by earlier writers such as Charles Singer, who implied that the Saxons had no theory of disease at all.[11] The textual evidence is nevertheless quite unequivocal and will be discussed in more detail in the following chapter.

Other Documentary Sources

The medical texts reveal the professional attitude to disease and its treatment, whereas other forms of literature give a more general view. From the latter it is possible to build up a picture of the kind of accidents and diseases suffered, the frequency of famine and pestilence, the kind of treatment available from the period before the medical texts survive, the attitude of the Church and the individual towards disease, and the general position of medicine within an everyday context.

Bede, as always, is an invaluable source, because of his detailed observation and historical veracity. The following quotation from his Life of St. Cuthbert is typical:

> "At the same time there suddenly arose in those parts a most grievous pestilence, and brought with it destruction so severe that in some large villages and estates once crowded with inhabitants, only a small and scattered remnant, and sometimes none at all, remained. So the most holy father Cuthbert, diligently traversing his diocese, did not cease to bring the ministry of the word and the help of much-needed consolation to the poor few who remained. Coming to one village, and having helped by his exhortations all whom he found, he said to his priest; 'Do you think that anyone is left in

---

11. Grattan + Singer, p. 92

these parts who needs to be visited and exhorted by us; or have we seen all who are in trouble and can we now pass on to others?' The priest, looking round everywhere, saw a woman standing at a distance who, having lost one son a little while before, was now holding his brother in her arms at the point of death; her eyes, streaming with tears, bore witness both to her past and present troubles. The priest pointed her out to the man of God, who did not delay, but, approaching her and giving her his blessing, kissed the boy and said to the mother, 'Do not fear, nor be sad; for your infant will live, nor will anyone else be missing from your home through this plague.' The mother herself and her son lived long afterwards to bear testimony to the truth of this prophecy." 12

be healed and will

Accounts such as this one bring out clearly the devastating course and high mortality of the plague, and the sense of powerlessness with which it was faced.[13] Such personal tragedies must have been multiplied a thousandfold during the course of an epidemic, and without a happy ending. But hearteningly, it is also the concern of Cuthbert which stands out clearly, as he wittingly courted danger in order to carry out his pastoral duties and restore the shattered morale of those who were left. Throughout the Anglo-Saxon period Churchmen seem to have readily risked infection in order to help those who were ill or in pain.

Other saints' lives contain similar stories, and also accounts of more mundane accidents. The Life of St. Wilfrid recounts an accident which happened during the building of Hexham Abbey:

"Now while the masons were constructing the highest part of the walls of this building, a certain young man among the servants of God slipped from a pinnacle of enormous height, fell to the ground and was dashed upon a stone pavement. His arms and legs were broken, all his limbs were out of joint, and he lay breathing

---

12. V.P., ch. 33
13. See Chapter 7

> his last; the masons, thinking he was dead, quickly carried him outside on a bier in obedience to the commands of the holy bishop, who was tearfully praying ..."

The bishop gathered all the monks together to pray for the life of the boy, "and the boy recovered the breath of life. The physicians bound the broken limbs with bandages and he grew better gradually from day to day." 14

Building accidents seem to have been quite a common occurrence, and this story can be paralleled by others in the life of Ethelwold,[15] and in the life of St. Wulfstan.[16] This particular incident however, is interesting in that it provides information about medical treatment in the seventh century, more than two hundred years before the earliest medical text survives, and suggests that the treatment of fractures was much the same throughout the Anglo-Saxon period.[17]

Bede also gives useful details:

> "In (the monastery at Dacre) there was a certain young man whose eyelid was disfigured by an unsightly tumour, which grew daily larger until it threatened the loss of the eye. Though the doctors sought to reduce it by applying fomentations and ointment they could do nothing. Some thought it should be cut away, while others opposed this course for fear of doing greater harm." 18

Similar "fomentations" are prescribed in the tenth century Leechbooks for swollen eyelids,[19] and indicate (as one would expect) that the remedies occurring in the late Saxon texts are based on a traditional body of practice

---

(Cambridge,) 14. Eddius, Life of Wilfrid ed. B. Colgrave 1927) ch. 23, pp. 46-7
15. Aelfric, Life of Ethelwold ch. 11 in Chronicon Monasterii de Abingdon ed. J. Stevenson,R.S. (1858)
16. Wm. of Malmesbury Life of St. Wulstan ed. R.R. Darlington (1928) II xvi
17. See Chapter 9
18. H.E. iv, 32
19. Lbk. I, ii, 23

Plate 1. Thirteenth century illustrations of surgery from B.M. MS Sloane 1977. Nos. 5 and 6 show trephinations, while the bottom row shows the treatment of fractures. From A.C. Crombie, Augustine to Galileo, I (1959), plate 39

going back some centuries. The mention of surgery is of interest since the medical texts contain very few descriptions of surgical operations. This does not necessarily mean that little surgery took place, for surgery is basically a practical subject, and has to be learnt by actually performing operations, not by reading books. Moreover, in a society with a strong oral tradition it is possible that the medical practitioners could have an extensive knowledge of surgical techniques without the necessity for a surgical literature. The kind of casual reference to surgery made by Bede and others certainly inclines one to believe that the Anglo-Saxons had a wider experience of surgery than might be expected if one's ideas were based purely on the evidence of the medical texts.

Another medical aspect which emerges from the literature, particularly from the letters, is a picture of the minor illnesses and chronic complaints suffered by the Saxons. Boniface, Alcuin, and their correspondents regularly complain of various ailments and comment on the death or illness of some relation.[20] Lull, for instance in a letter to Boniface, writes, "I have not been able to apply myself to study as closely as I knew I ought to do. This was due to two causes, a dimness of eyesight and headaches, and especially to a third, trouble of the intestines, causing a dullness of mind."[21] Disabilities such as these, or others such as deafness or poor eyesight, which today are easily rectified with hearing aids or glasses, were then much more

---

20. The Letters of St. Boniface (Columbia, 1940) trans. E. Emerton nos. v, xxi, xxv, xxviii, lxxxiii. Alcuin in P.L., c. ep. xxxvii, lxv, xcvi, cxxviii, clxxiii et passim
21. Ibid., No. lxxxiii

serious problems. In another letter Boniface asks for a copy of the Book of Prophets "in clear letters, written in full ... with my fading sight I cannot well read writing which is small and filled with abbreviations".[22] In the same letter he condoles with Bishop Daniel of Winchester, who has himself become completely blind.

Chronic ill health was also not uncommon. Ethelwold was frequently ill: "He was often afflicted with illness in his bowels and legs, spending sleepless nights through pain, and nevertheless going about by day as if well, though pale."[23]

Alfred too, suffered from illness for most of his life. As a young man he had haemorrhoids, but at the age of twenty he contracted another, more severe disease, "omnibus medicis incognito ... die noctuque incessabiliter fatigavit, sed si aliquando Dei misericordia unius diei aut noctis vel etiam unius horae intervallo illo infirmitas seposita fuerat, timor tamen ac tremor illius execrabilis doloris unquam eum non deserit, sed quasi inutilem eum ut ei videtur, in divinis et humanis rebus propemodum effecit".[24] It has been suggested that he suffered from epilepsy, or more probably, from some kind of stone,[25] though in fact neither of these diseases were unknown to Anglo-Saxon doctors.

Others suffered from severe illness for some time before they died. Tortgith, a nun at Barking, was ill for nine years, and "was so wasted away by the disease ... that her

---

22. Ibid., 1i
23. Aelfric's Life of St. Ethelwold op. cit., 20
24. Asser's Life of Alfred ed. W.H. Stevenson (Oxford, 1904) ch. 74
25. Alfred the Great (New York, 1919) B.A. Lees p. 116

bones scarcely held together, until finally as death drew near she lost the use of her limbs and even of her tongue".[26] Hild, "was attacked by a fever which tortured her with its burning heat, and for six years the sickness afflicted her continually",[27] and Benedict Biscop suffered from a creeping paralysis for three years before he died.[28] Sebbi, king of the East Saxons, who abdicated his kingdom to become a monk, was afraid that "if he felt great pain in the hour of death, he might by his words or his gestures act in a way unworthy of his character. So summoning the bishop of London, the city in which the king was then living, he asked him that there should be no others present at his death-bed except the bishop and two of his servants".[29]

The attitude of society towards the sick man was not one of gloomy fatalism, as might be expected when the resources to effect a cure were so meagre. Instead it was one of real concern for the suffering individual. This attitude was inculcated and encouraged by the Church, which placed great emphasis on the care of the sick, in the Benedictine Rule, and elsewhere. The idea that the Church regarded disease primarily as a punishment for sin is not a tenable one. Among early Churchmen "the threat of mental or physical illness as a punishment for a specific sin is rare; disease is thought to stem from natural causes and the resources of human medicine must be invoked, although God may permit man to fall sick and suffer for His own inscrutable ends".[30] Aelfric in his Homilies gives the

---

26. H.E. iv. 9
27. H.E. iv. 23
28. H.A.B. 11
29. H.E. iv. 11

view of the late Saxon Church.

> "for divers causes are Christian men afflicted with disease, sometimes for their sins, sometimes for trial, sometimes for God's miracles, sometimes for preservation of good causes that they may be the humbler; but in all these things patience is needful ... If the sinful be afflicted with disease for his unrighteousness, then if he with patience praise his Lord and pray for mercy he shall be washed from his sins by that sickness, as a foul garment by soap. If he be righteous he shall have greater honour through his sickness if he be patient. He who is impatient and with froward mind murmurs against God in his sickness, shall have double condemnation, for he increases his sins by that murmuring and suffers nevertheless." 31

Bede and other writers confirm this complex view of disease, and also suggest that the resources of earthly medicine are seen as the first line of defence. "The healing of medicine is not to be despised, for we also recall that Isaiah ordered a medication for Ezechiel when he was ill, and the Apostle Paul said that Timothy ought to take a little wine."[32] And Aelfric again "Medicine is granted for bodily infirmity, and holy prayers with God's blessing, and all other aids are hateful to God."[33]

Perhaps the most potent indication of the favourable attitude of the Church towards medicine and the medical profession, lies in the fact that Churchmen are constantly drawing analogies between the Church's cure of souls and medicine's cure of the body. In the Benedictine Rule the Abbot is frequently urged to act "ut sapiens medicus", and writings such as Alfred's version of Gregory's Pastoral Care and Aelfric's Homilies contain numerous medical references:

---

30. W.D. Sharpe, "Isidore of Seville: The Medical Writings". Trans. Amer. Phil. Soc. 54 pt. 2 (1964) p. 15
31. Aelfric's Homilies Vol. 1 ed. B. Thorpe 1843-6 pp. 470-73
32. Isidore Etymologies iv. 9. 1., in W.D. Sharpe op. cit.
33. Aelfric, Lives of the Saints Vol. 1 ed. W.W. Skeat E.E.T.S. (1881-1900) p. 379

"God is the true leech, who by divers afflictions heals the sins of his people. The world's leech is not cruel, though he cure the wounded with burning or the cutting knife. The leech cuts or burns and the patient cries, yet he has no mercy on the other's moaning, for if the leech desist from his craft, then will the wounded perish. So also God cures the sins of his chosen with divers diseases; and though it be wearisome to the sufferer, yet will the good leech cure him to everlasting health." 34

Palaepathology

The third source of evidence for Anglo-Saxon disease and its treatment comes from the modern scientific disciplines. Of these palaeopatholgy is the most important, since the study of skeletal material reveals much, not only about the illness and injury which afflicted an individual skeleton when a living human being, but also about the way of life of a whole population.

> "The pattern of disease or injury that affects any group of people is never a matter of chance. It is invariably the expression of stresses and strains to which they were exposed, a response to everything in their environment and behaviour. It reflects their genetic inheritance (which is their internal environment), the climate in which they lived, the soil that gave them sustenance, and the animals or plants that shared their homeland. It is influenced by their daily occupations, their habits of diet, their choice of dwelling and clothes, their social structure, even their folklore and mythology." 35

For the Saxon period this kind of information is extremely useful, because it can be amplified and confirmed by the literary evidence and by archaeology to build up a general picture of the social background, and to suggest ways in which the Saxons reacted and adapted to their environment.[36]

---

34. Aelfric, Homilies, pp. 472-3
35. Calvin Wells, Bones, bodies and disease (1964) p. 17
36. See also Chapter 9

One of the problems with dealing with skeletal material is that since the soft tissues have disappeared it is only possible to diagnose infections which attack the bone. For this reason many acute febrile diseases such as smallpox, measles or influenza are impossible to identify, and it is usually the more chronic afflictions such as arthritis or tuberculosis which leave their mark. Moreover, the bone may only be affected as the end process of a prolonged attack on the tissues, and infections which are easily distinguishable in life may leave very similar evidence on the skeleton. Because of this, and because it is impossible to ask the patient for a case history of the problem, the palaeopathologist can only make tentative diagnoses, and often the closest he can come is to suggest that it is one of several possible conditions.

> "The history of the final lesion can only be inferred, never known with certainty. No clinician needs to be reminded of how important it is to obtain a meticulous case history before venturing to diagnose, and it is precisely because we can never achieve this with ancient material that a profound knowledge of clinical medicine is essential to palaeopathologists. Only clinicians and clinical pathologists who spend their lives watching the progress and evolution of disease as a living phenomenon affecting living organisms and who develop a sense of pathological cause and effect are qualified to express opinions about archaic manifestations of disease. This subject is not a coconut shy for dilletante archaeologists and non-medical anthropologists, - though many try to make it so." 37

Unfortunately these important factors are not generally understood by archaeologists. Indeed, it is only recently that skeletons have been considered as archaeological evidence at all. Though every small sherd of pot, and every

---

37. Calvin Wells, "The study of ancient disease", Surgo 32 (1964) pp. 3-7

corroded lump of metal is diligently preserved and recorded, in the past the erstwhile owners of these objects have been carelessly cast aside or hastily reburied. Now, having accepted the fact that skeletons are worthy of examination, the job is all too often given to an anthropologist. The result is a report which provides information on sex, average age at death, average height, and possibly a few obvious deformities, such as an ill-healed fracture. There then follow numerous indices, - cranial indices, nasal indices, orbital indices and so on, succeeded by copious lists of measurements of crania, long bones etc. continuing for pages. The startling conclusion of all this industry is the announcement that these skeletons come from a typical Anglo-Saxon group, - information which any competent excavator could have deduced from a cursory look at the grave goods. The average archaeologist is thus confirmed in his suspicion that the excavation of skeletons is a time-consuming bore, and that specialist reports such as these are of value only to other specialists; and returns with relief to the problems of Middle-Saxon pottery.

The fault, let it be said, lies as much with the archaeologist as the anthropologist. For the anthropologist is trained only to deal with measurements and indices, to look for norms and means, and median points, to seek out genetic affinities, and to consider what is common in a population, not what is individual. To expect him to do otherwise is to expect him to do something for which he is not trained. One would never turn to an anthropologist when ill and ask him to diagnose one's illness; still less then can he interpret the far more ambiguous evidence of the diseased bones. But if one wants information about

the pattern of disease and injury that has affected a group of people (which is the area where the archaeological evidence and the pathological evidence are most likely to complement each other), then one must ask a medically trained pathologist. For to a pathologist each skeleton is clothed with flesh, and it is this knowledge of the muscles, arteries, tissues and other vital organs which once enclosed the bones, the experience of pathological cause and effect, and the whole awareness of the living human being that these bones once were, that makes a pathologist's report so convincing.

As an example there follows some extracts from a report on a skeleton found in a pit on a Saxon kiln site in Ipswich.[38] The body was that of a man, aged about 32 years, and the skeleton showed severe injuries. Through careful examination it was possible to deduce that the man was probably a mounted soldier, and the sequence of blows which killed him could be reconstructed in some detail.

The most obvious injury was an extensive fracture across the skull (Plate 2). 'The upper part of this wound, about 63 mm in length, has been cleanly cut on the fresh bone by a sword or similar weapon ... Although it is a severe wound there is no doubt that it need not have been immediately fatal. It is clear however, from its appearance that, in fact, death quickly supervened: not the slightest trace of healing is present.

A wound such as this in which the blow fell almost vertically downwards on to the summit of the skull is not easy to inflict unless the aggressor is on a higher level

---

38. N. Smedley + E.J. Owles, "Some Suffolk kilns: iv. Saxon kilns in Cox Lane, Ipswich 1961"
Calvin Wells, "The Human Skeleton", Proc. Suff. Inst. Arch., 29 (1963) pp. 304-335

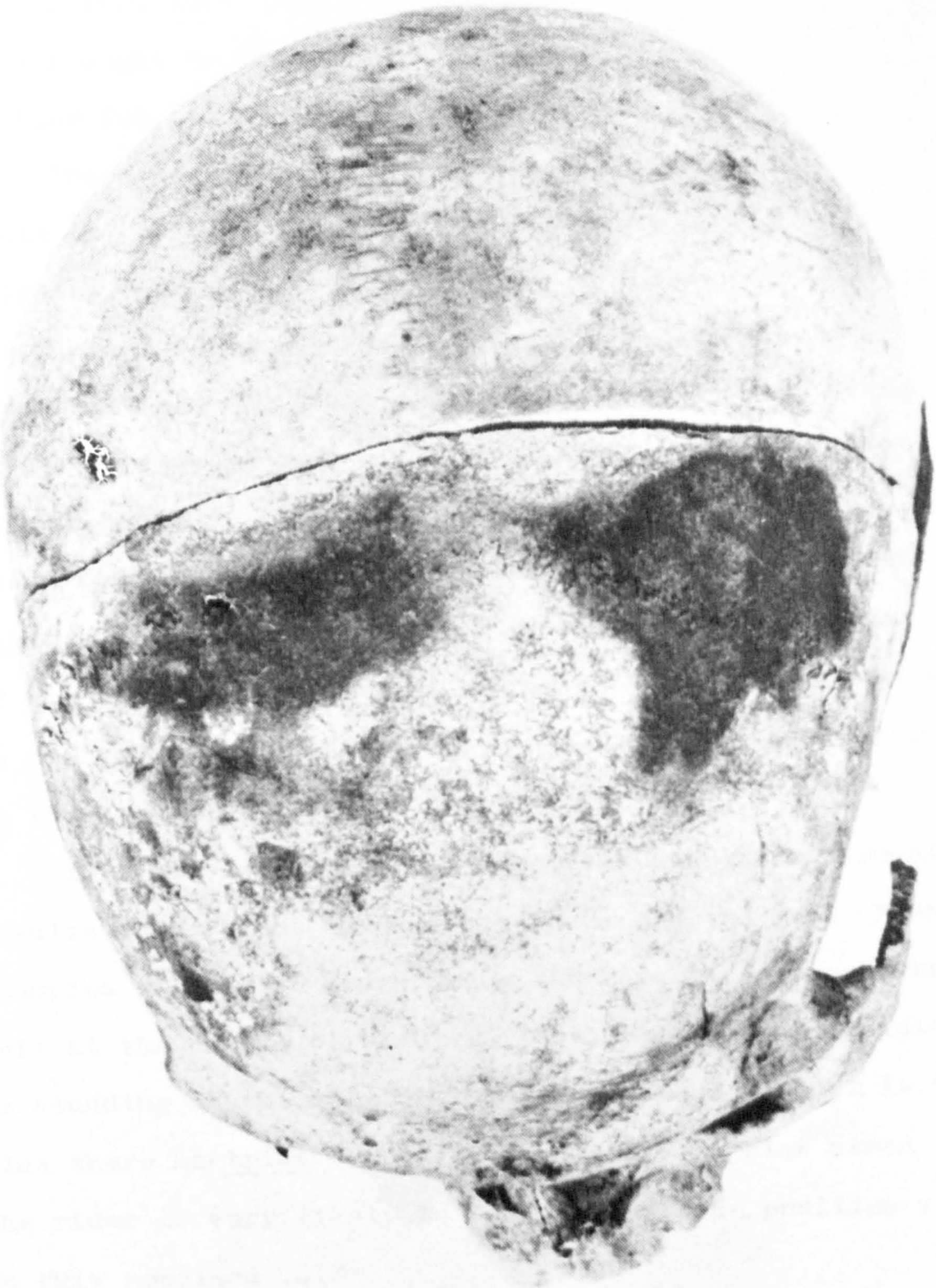


Plate 2. Skull, showing sword cut.
(from N. Smedley and E.J. Owles, op. cit., plate xliv.)

than the victim. This raises the question as to whether the victor might have been on horseback. Alternatively it is possible that before the blow fell the victim had already been brought to his knees. It is important, therefore, to look for evidence which might resolve the problem.

The left femur provides the answer. This bone has a small cut on its antero-lateral surface a little more than half-way down it.[39] It is typical of a sword-cut and is interesting because it was delivered slightly obliquely from below upwards. A blow in this direction can be landed on an adversary's left thigh by a right handed opponent swinging a sword under his guard and sweeping upwards thereafter. It would sever the two main elements of the quadratus femoris muscle which is the paramount extensor of the leg. With these muscles severed a standing man drops to the ground and this may well have been the first step in the destruction of our present victim.

This particular femoral injury is one which commonly results when a foot soldier attacks a mounted man. Many examples of it were found among the remains of those who fell at the battle of Wisby in 1361. If the foot soldier is standing on the left of the horse's head - which is the side where he tries to position himself - a blow aimed at the rider is very likely to fall in just the position we find on this specimen ..."

As a result of the injury, "extension (of the leg) becomes impossible, no counter-thrust against the stirrup can be obtained and the victim is easily toppled or dragged

---

39. See plate 3

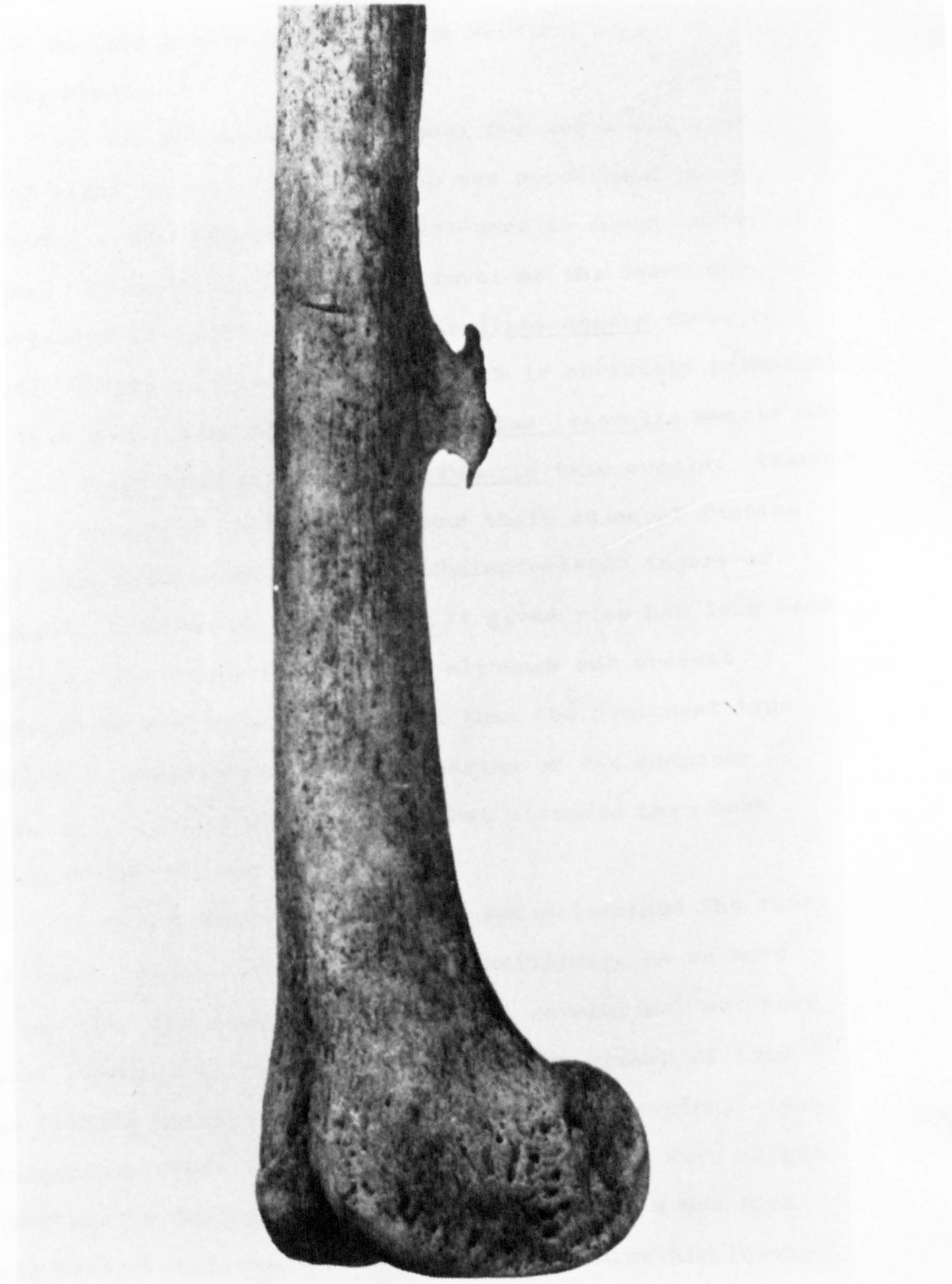


Plate 3. Left femur, showing sword cut and Rider's bone.
(from N. Smedley and E.J. Owles, op. cit., plate xlv.)

from his mount. Which ever way we reconstruct the event we now have our subject on the ground and his assailant could certainly have inflicted the vertical wound on the vault of the skull..."

"... It is interesting to look for any other evidence which might suggest that this man was accustomed to ride horses ... A stronger piece of evidence is found in the left femur. Here, at about the same level as the sword cut, on the posterior surface close to the linea aspera there is a small, craggy outgrowth of bone which is obviously pathological. At this point some fibres of the vastus lateralis muscle and of the short head of the biceps femoris take origin. Tearing of the fibres of these muscles and their adjacent fasciae and underlying periosteum is a characteristic injury of riders. The exostosis to which it gives rise has long been known as the 'Rider's bone' and although our present example is slightly more lateral than the commonest type (which is usually produced by tearing of the adductor muscles) there is little doubt that it could have been produced in the same way ...

So far, however, we have not yet determined the cause of death, since there is a fair possibility, as we have seen, that the cranial wound, though severe, may not have been immediately fatal. Although I have spoken of this as falling vertically on the upper parietal region, close inspection shows that it was delivered with a very slight (perhaps 10 degrees) forward slant. This in a man with one useless leg, would be sufficient to throw him forward, face down or on his hands and knees. He then becomes catastrophically vulnerable. His back is now uppermost and we ought to look for a wound which could be inflicted

Plate 4. Eighth and ninth ribs. (From N. Smedley and E.J. Owles, op. cit., plate xlvii)

in this position ..."

The answer is to be found in the ribs of the right side, where the eighth and ninth ribs both showed the remains of a clean cut which was obviously the result of a dagger or lance thrust from behind.[40] "Such a wound, if of any depth, would penetrate the right lung and liver. Bleeding from the latter would be profuse and probably rapidly fatal. We need look no farther for the lethal blow ..."

Such a report brings out clearly the increased awareness of the medical man. A layman would probably seize on the wound on the skull as being the most serious, since it is the most dramatic, but this only seems so because the scalp has little protection, - one has only to penetrate the skin to reach the bone. It also needs a pathologist with his detailed knowledge of the body's muscles and their functions to realise that the apparently minor cut on the femur is in fact the most significant injury in bringing the downfall of the victim because of the severing of the muscles and the resulting incapacity of the leg; and it requires a precise knowledge of the vital organs of the body to recognise that it was the thrust through the ribs that was the fatal blow, because it must have penetrated the liver. Moreover, these deductions are based merely on experience in physiology, whereas the interpretation of many other skeletons requires much more than this. The palaeopathologist must know what is normal in a body and what is not, what is diseased and what is not, and if a bone is diseased, what disease is it, and what does it signify? What might have caused it, and how will it have affected the patient, and what long-term effects may it

---

40. See plate 4

have? All these questions go far beyond the mere recording of the average age at death.

A single skeleton, such as the one discussed above, can reveal a great deal about the individual concerned, but not much about the group or society in which he lived. Likewise, the identification of isolated cases of, for instance, Paget's disease,[41] or leprosy,[42] establishes that these diseases existed in the Anglo-Saxon period, but goes little farther. Instead it is the constantly recurring pattem of minor injuries and afflictions which reflects the occupations and way of life of a people. The almost universal frequency of arthritis among the Anglo-Saxons, particularly in the spine, is an indication of the strains and stresses of their basically agricultural way of life, with its frequent bending, lifting and carrying of loads; the heavy attrition on all teeth is probably due to the grit in the stone ground flour and the general toughness of the diet, while the lack of cavities suggests that there were few sweet things included.

The pattern of fractures is also significant. Among the ancient Egyptians fractures of the ulna in the forearm are a common occurrence. This is known as a "parry fracture" because it is usually caused by raising an arm to protect one's head against a blow. Its relative infrequency among the Saxons suggests that they were domestically at least, less quarrelsome than the Egyptians. In contrast, the commonest fractures among the Saxons are those of the leg, caused by

---

41. Calvin Wells + Nicholas Woodhouse, "Paget's disease in an Anglo-Saxon" Medical History 19 (1975) pp. 396-400
42. Calvin Wells "A possible case of leprosy from a Saxon cemetery at Beckford" Medical History 6 (1962) pp. 383-385

falls, possibly from stumbling in furrows or slipping in mud, or other occupational hazards of working on the land.

The fractures are interesting for another reason, in that they reveal something about the medical care available. Though most of the fractures have healed soundly, in some cases the two halves of the bone have been displaced and the limb has thus been shortened, indicating that no reduction or setting of the bone was attempted. This is not in itself surprising, for it was not until the development of anaesthetics in the nineteenth century and the extensive use of traction that it was possible to set the limb by reducing the muscle spasms which were caused by the fracture, and which held the broken bones rigid.

Occasionally Saxon skulls are found with healed trephine holes in them,[43] thus providing evidence for surgical skills which are not mentioned anywhere in the medical texts themselves. There is also some tentative evidence for simple dentistry,[44] again not mentioned in the texts. This tends to reinforce the opinion, discussed earlier, that it would be unwise to assume that the Anglo-Saxons had little knowledge of surgery merely because surgical operations are referred to only infrequently in the medical literature.

In these ways palaeopatholgy can not only provide evidence about the frequency and types of diseases from which the Anglo-Saxons suffered, but it also produces valuable information about their social structure, social conditions, general way of life, not necessarily related directly to

---

43. Calvin Wells "Probable trephination of five Early Saxon skulls" Antiquity 48 (1974) pp. 298-302
44. Calvin Wells, report on the skeletons at North Elmham (unpublished)

health and disease.

Pharmacology

Other recent research work, in pharmacology, also has a bearing on Anglo-Saxon medicine. Until the past century, when it was discovered that some drugs could be made synthetically, most medicines were herbal in origin, but with increased use of synthetic drugs plant remedies went into decline, and a rather antipathetic attitude developed towards them, which regarded all herbal medicines as useless, and nothing more than old wives' tales.

"This situation results, in part at least, from the rather contemptuous attitude which certain chemists and pharmacologists in the West have developed towards both folk remedies and drugs of plant origin ... They ... fell into the error of supposing that because they had learned the trick of synthesizing certain substances they were better chemists than Mother Nature who, besides creating compounds too numerous to mention, also synthesised the aforesaid chemists and pharmacologists."[45]

Fortunately, however, the pendulum is now swinging back the other way, and pharmacologists have been investigating the plants used in folk medicine, and increasingly identifying alkaloids with active medical qualities, thus vindicating many of the folk remedies. Many modern drugs are based on alkaloids originally derived from plants. For instance, the active principle in aspirin, salicylic acid, is obtained from willow bark, which was used in folk medicine for the

---

45. De Ropp, quoted by R.E. Schultes p. 104 in T. Swain, Plants in the development of modern medicine (Cambridge, Mass., 1972)

same purposes as aspirin, and though today aspirin is made from phenol, a derivative of coal tar, the resultant drug is no more efficient than that derived from willow bark, - it is merely that it is cheaper and easier to make it that way.

Many of the herbs used in the Anglo-Saxon pharmacopeia have been found to contain valuable alkaloids. Henbane, hemlock, fennel, pennyroyal, centaury, wormwood, mint, garlic and many others are still used for the medical substances they contain. Henbane, for example, (Hyoscamus niger) contains hyoscamine and scopolamine. Scopolamine has a sedative effect on the central nervous system, and today is administered to mental patients.[46] In the Anglo-Saxon period it was given as a sleeping draught: "If a man cannot sleep: Take henbane seed and juice of garden mint; stir together; smear the head therewith."[47]

One of the problems in considering the medical properties of the herbs used by the Anglo-Saxons is the actual identification of the herbs themselves. Some of the herbs are known only by their Old English names, whereas others, particularly in the translation of the Ps.Apuleius text, have both Latin and Old English names. However, even when a modern plant has a similar Latin name it cannot always be assumed that it is the same plant as the one mentioned in the Anglo-Saxon period. For this reason less than half the herbs used by the Saxons can be identified with any certainty, which makes assessment of the value of the Saxon pharmacopeia

---

46. Gustav Schenk, The Book of Poisons (1956) p. 38
47. Lacn. clvii

very difficult.

All these disparate sources of evidence, discussed above, provide information about Anglo-Saxon medicine and its social background, but there is some difficulty in their use because they tend to be mutually exclusive. Modern scientific disciplines are extremely precise and detailed, whereas the Anglo-Saxons are rather vague and general. For instance, a palaeopathologist may say that osteochondritic defects of the knee are not uncommon among the Saxons, while the Saxon medical texts only provide remedies for a "swollen knee" or "pain in the joints", which can cover a multitude of conditions. It is likewise with the general literature. A woman who lived near Worcester was afflicted with "a malady which seized not only on one member, but on every limb, and stiffened and knotted all her joints."[48] This may have been severe arthritis, which is known from the skeletal material to have been widespread, but it could also be other diseases such as Paget's disease or even Parkinson's disease, which have similar crippling effects. However, the author of this story was concerned to write a saint's life, not a medical manual, so one cannot expect a detailed account of the symptoms.

There are also some problems in using descriptions of diseases and accounts of healing miracles from lives of the saints, since it might be argued that not all these incidents were genuine, but some, such as the healing of a blind man, or of a woman sick of a fever, were included in order to parallel the healing miracles of Christ and other early lives

---

48. William of Malmesbury, Life of Wulstan ii, p. 13

of the saints, and to add veracity to the particular saint's claim to holiness. This may be true in some cases, but many of the "miracles" in early Saxon writers, such as Bede, can be explained simply in terms of a forceful personality giving a sick person the will to live, and in the foreshortening of the period of convalescence for the sake of dramatic effect, - the stories do not necessarily require any supernatural explanations. Though some healing miracles may have been included in order to follow a recognised pattern, the wealth of circumstantial detail and detailed evidence which make up the descriptions suggests that though the particular incident may be largely imaginary or at least somewhat embroidered, the writers were drawing on their own knowledge and experience of a disease when they described its symptoms and effects. It thus seems reasonable to assume that any ailment or illness described in the literature was one well-known in the Anglo-Saxon period, and would have been recognised as a common type by its readers. This view is in part corroborated by descriptions in the medical texts which show preoccupations with similar illnesses to those described in the saint's lives and other literature.

The range of evidence for medical conditions and medical treatment, though very different in character and difficult to assess, does have areas where the evidence is complementary. Palaeopathology has confirmed and added to the information on social conditions and the way of life of the Saxons that has already been put together from archaeology and the literary evidence. The general literature and the medical texts can be used together to suggest means of treatment and attitudes to disease, and the application of modern pharmacological

research to the medical texts can suggest, however imperfectly, something about the value of the medicines prescribed. It is thus possible to build up a picture of Anglo-Saxon medicine and its social background which is much wider and more broadly based than previous work, which relied almost entirely on the literary material.

CHAPTER 2: THE MEDICAL TEXTS

The medical texts which have survived from the Anglo-Saxon period in England consist mainly of compilations from late Classical sources translated from Latin into Old English. In this they differ from their continental counterparts, for though a much greater wealth of Latin manuscripts survived there, Western Europe produced no contemporary vernacular literature for comparison. The fact that in England texts or extracts from texts were translated into Old English, helps to indicate which medical sources were considered valuable for practical use (rather than merely being recorded as a literary form), but being in the vernacular and therefore accessible to a wider audience, they include a greater element of folklore and magical practices than was common in the Latin texts on the Continent. As a result it has been fashionable in the past to decry Anglo-Saxon medicine in such terms as a "mass of folly and credulity",[1] and even recently the texts have been described by Beccaria as "di carattere empirico e superficiale, e in ogni caso multo inferiore a quello dimonstrato per altre materie scientifiche".[2]

The origins of these texts can be traced back to Greek and Latin sources, and though some of these sources are not now extant in England, it can be shown that the Anglo-Saxons knew and assimilated as much classical medicine as their continental neighbours, and that their medical theory and practice was in no way inferior.

---

1. Grattan + Singer, p. 92
2. A. Beccaria I codici di medicina del periodo presalernitano (Rome, 1956) p. 51

To attempt to trace all the sources known to the Anglo-Saxons would form a thesis itself, and much invaluable work is already being done by Charles Talbot. This chapter therefore does no more than lay out the general background to the texts, and draws extensively from Talbot's work.

When the Anglo-Saxons invaded Britain after the withdrawal of the Roman legions they came into contact with a Celtic society which, outside the urban areas, was only superficially Romanised. The Roman army was provided with a very efficient medical service, as the legionary hospitals at such sites as Housesteads and Inchtuthil suggest,[3] but there is little to indicate that Roman medicine was available to the native population as a whole. A temple complex at Lydney in Gloustershire was dedicated to the healing god Nodens, and was presumably visited by the Romanised strata of society, and a Roman surgical instrument has been found at a Romano-British site in Norfolk.[4] At Llangian in Caernarvonshire a sixth to seventh century tombstone records the death of a medical practitioner.[5] The inscription reads "MELI MEDICI FILI MARTINI IACET", the form of which suggests an Irish origin.[6] Nevertheless, little can usefully be inferred from these isolated scraps of evidence, and it seems futile to speculate about the survival of Roman medicine into the Anglo-Saxon period.

The Anglo-Saxons brought with them to Britain a native

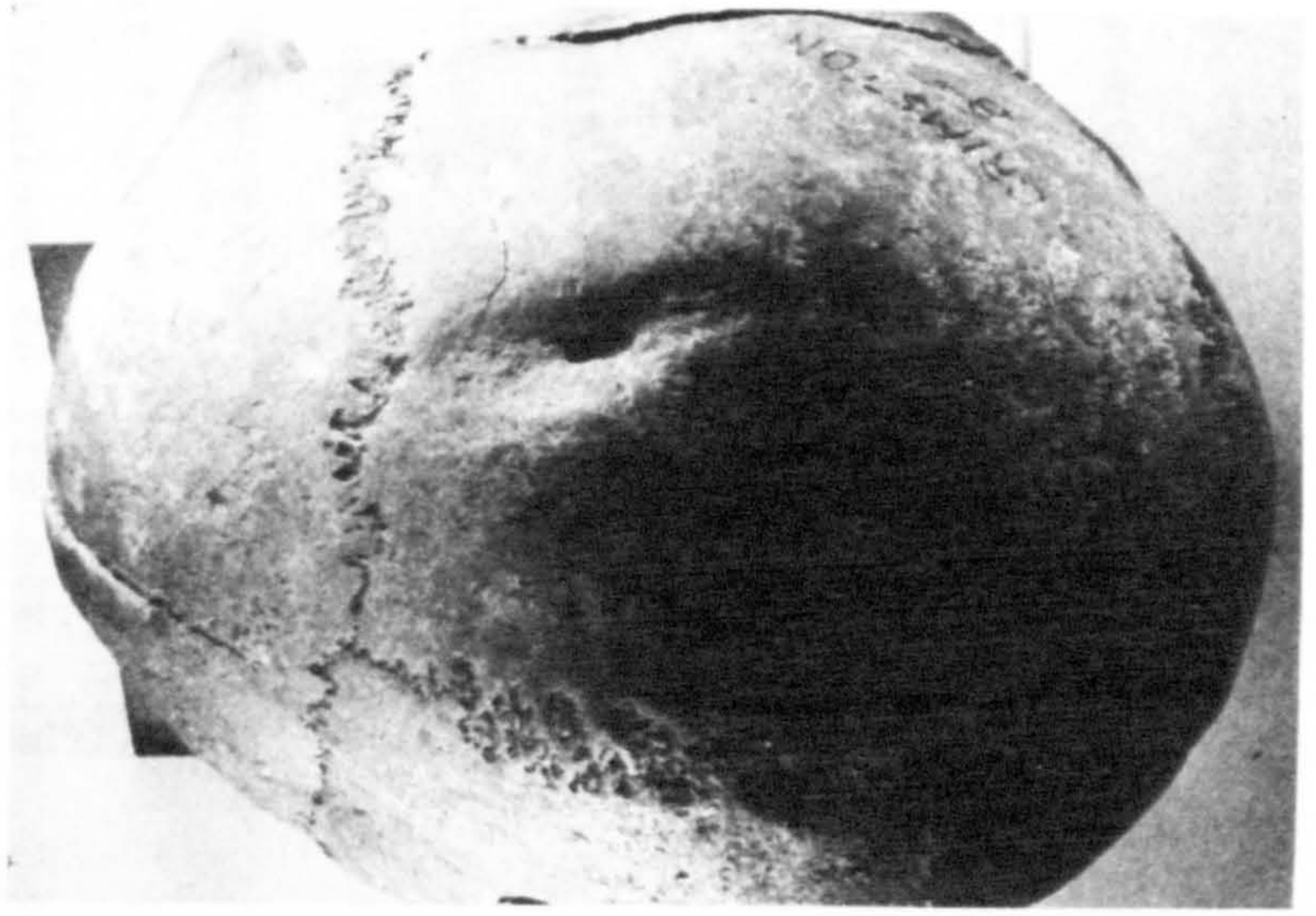
---

3. For this and other details see R.W. Davies, "The Roman military medical service", Saalburg-Jahrbuch 27 (1970) pp. 84-104
4. Calvin Wells, "A Roman surgical instrument from Norfolk", Antiquity 41 (1967) pp. 139-141
5. J. Cule, "Medical Practice in Roman Britain", Update Plus 1, (1971) pp. 228-9
6. For dating the Irish connexions, see C. Thomas, Britain and Ireland in Early Christian Times (1971) p. 106

a

b

c



d

Plate 5. A group of trephined skulls from pagan Saxon sites in East Anglia. All the operations were probably performed by the same man. (From Calvin Wells, "Probable trephination of five Early Saxon skulls," Antiquity 48 (1974) plate 34)

herbal lore and a jumble of magical and pagan practices, together with ideas such as the doctrine of the worm, the elfshot and flying venom, which survived into later Anglo-Saxon medicine.[7] They also had some knowledge of surgery as is indicated by the healed trephine holes occasionally found on skeletons from pagan cemeteries.[8] But in the absence of written evidence it is difficult to say more about their medical knowledge at this period.

The conversion of the Anglo-Saxons to Christianity was the crucial element in the development of Anglo-Saxon civilisation. In the seventh century important intellectual links were forged with Ireland and the Continent which stimulated the passage of manuscripts and scholars, and more particularly enabled the transmission of classical medicine to England. A significant figure in this chain was Theodore of Tarsus, who arrived in England as the new archbishop of Canterbury in 669, accompanied by Hadrian, a North African. Theodore had been a monk in the Greek church and was so thoroughly Greek in outlook that the Pope sent Hadrian with him to England to ensure that he introduced no Eastern customs into the Church there.[9] Both were men of wide experience and classical learning, and the school at Canterbury which they established, or re-established, soon attracted a wide circle of students. According to Bede, "In addition to instructing them in the holy Scriptures, they also taught their pupils poetry, astronomy, and the calculation of the Church calendar. In proof of this some of their students still alive today are

---

7. Grattan + Singer, p. 52
8. Calvin Wells, "Probable trephination of five Early Saxon skulls", Antiquity 48 (1974) pp. 298-302
9. H.E. iv. 1

as proficient in Latin and Greek as in their native tongue".[10] Aldhelm who was a pupil at Canterbury, gives a more detailed list of subjects, which, significantly, includes medicine,[11] and an episode recounted by Bede about John of Beverley, also indicates that medicine was studied there. The bishop when visiting a convent was asked to give his blessings to a nun who was suffering from a badly swollen arm as a result of bloodletting:

> "He enquired when the girl had been bled and when he learned that it had been on the fourth day of the moon, he said, 'You have acted most foolishly and unwisely to carry out blood-letting on the fourth day of the moon. I remember that Archbishop Theodore, of blessed memory, said that it was very dangerous to bleed at a time when the light of the moon and the pull of the tide is increasing'." 12

No medical works are mentioned by name by the students at Canterbury, but Theodore and Hadrian would have had various compilations from Hippocrates, Galen and others available to them, both in the original Greek and their later Latin translations. In the early Christian centuries the tendency was for the great mass of Greek medical writings to be reduced to compilations; the compilations were then abridged; and the abridgements were finally reduced to one small, but practical section.

It was mainly these reduced abridgements that were translated into Latin and circulated round Western Europe. Oribasius' abridgement of Galen was translated into Latin in the sixth century, and Alexander of Tralles likewise in the seventh century. Paul of Aegina's epitome was based

---

10. H.E. iv. 2
11. Aldhelm, De Virginitate, xxxv p. 276 in Monumenta Germaniae historica 151, ed. R. Ehwald (Berlin, 1913-19)
12. H.E. v. 3

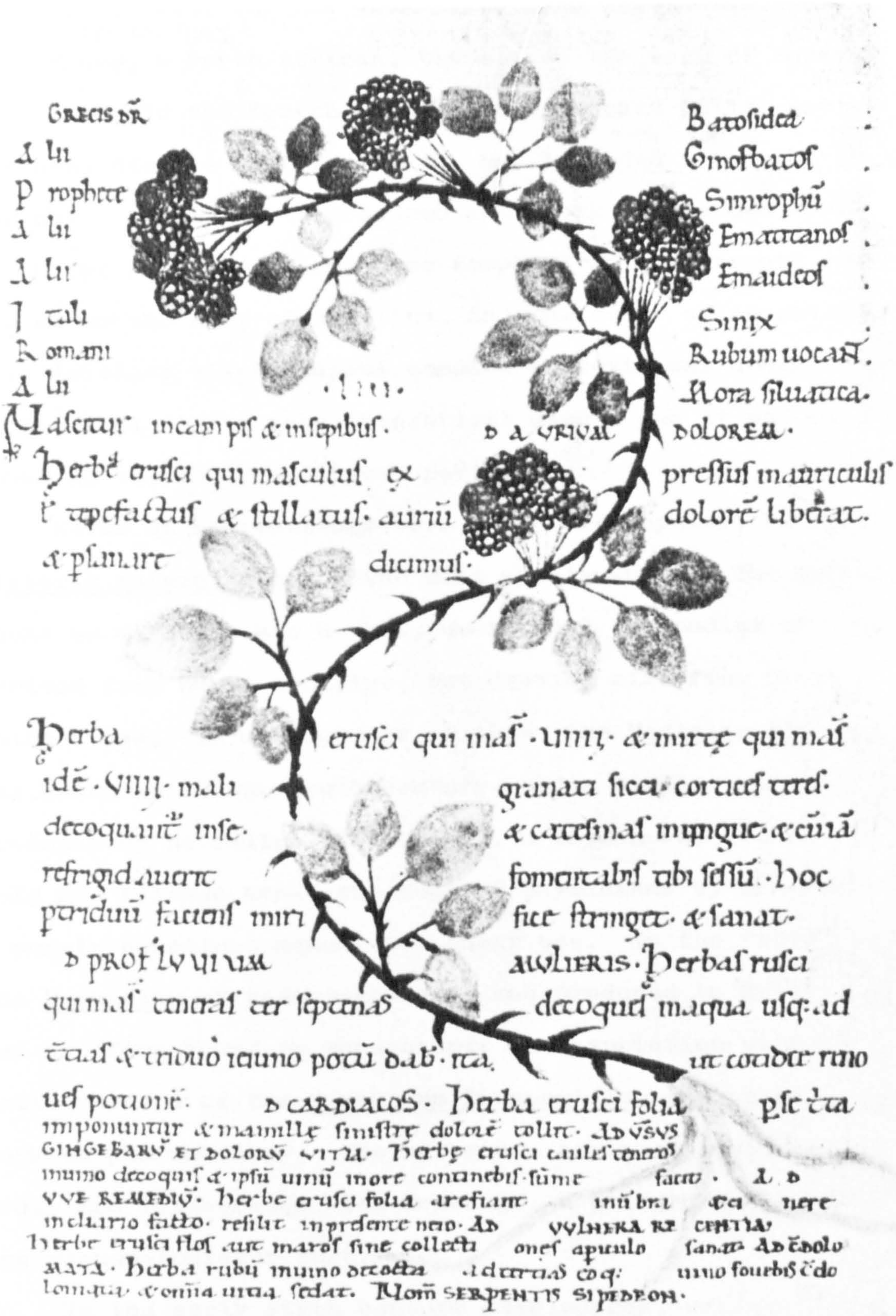


Plate 6. Illustration of a bramble from Oxford MS Bodley 130, a twelfth century version of the Herbal of pseudo-Apuleius.

partly on Oribasius and partly on Galen, and his work was summarised still further when translated into Latin. Caelius Aurelianus, a North African, translated the work of Soranus into Latin in the fourth century, and Cassius Felix, another African, did the same for Galen, and included a section from Soranus. Caelius also produced some work of his own, from which two other treatises were compiled in the seventh century, one under the name of Aurelius, and the other of Aesculapius. This Aurelius + Aesculapius complex of texts was designed as a practical rather than theoretical manual and it was well known in the early mediaeval period.

Works on pharmacology were even more popular, Pliny's Historia Naturalis being the most widely known. The twelve books on medicine are a vast, uncritical compendium of remedies derived from Roman medicine, but drawing also from Greek authorities. An abridgement of this, the Medicina Plinii, was drawn up in the fourth century, and a similar work was produced by Marcellus of Bordeaux, a layman who wished to help his friends avoid the fees of physicians by drawing up a purely practical manual for their use. In the fifth century the Herbarium of pseudo-Apuleius was produced in North Africa and is often found in manuscripts in association with the Latin version of the Herbarium Dioscoridis, the chief Greek work on pharmacology. The herbs are arranged in alphabetical order and illustrated with drawings, a pattern followed by the pseudo-Apuleius text.

In the early sixth century Cassiodorus, writing to the monks of Vivarium, recommends a number of medical texts for study, giving an indication of which texts were available in translation at the time, and also the sources that were thought to be most valuable:

> "And so study with care the nature of herbs and the compounding of drugs. If you have no knowledge of Greek, you have at hand the Herbarium of Dioscorides, who fully described the flowers of the fields and illustrated them with drawings. After that read Hippocrates and Galen in their Latin versions, Galen's treatise Ad Glauconem and the anonymous author who made a compilation from various writers. After that read Aurelius Caelius De medicina, Hippocrates De Herbis et cibis, and other books dealing with the art of medicine, all of which I have left to you on the shelves of the library." 13

Unfortunately there are no such detailed references to the texts available in England before the ninth century, but it is possible to obtain hints from references in contemporary writers. Bede, for instance, is known to have had an incomplete text of Pliny's Historia Naturalis, and a copy of Isidore's Etymologies, whose book IV deals with medicine.[14] In Actus Apostolorum Retractionis Liber[15] he quotes a chapter on dysentery from Cassius Felix, and in two chapters in De Temporum Ratione[16] he quotes from short medical tracts. One is a seasonal regimen attributed by Bede to Hippocrates but which is apparently a Latin translation of a Greek letter of Diocles to Antigonus.[17] The nearest recension to Bede's is one attributed to Marcellus of Bordeaux which exists in several ninth century manuscripts.[18] The other is an account of the four elements, humours, and seasons of the year which is very similar to a letter on the same topic by Vindician, physician and friend of Augustine of Hippo.[19]

---

13. Cassiodorus, De instit. divin. litterarum c.31 P.L. lxx, p. 1146
14. J.D.A. Ogilvy, Books known to the English 597-1066 (Cambridge, Mass./1967)
15. Ch. 28:8
16. Chs. 30, 35 Ed. C.W. Jones, Bedae: Opera de Temporibus (Cambridge, Mass./1943)
17. Ibid., p. 365
18. Ibid., p. 365
19. Ibid., p. 365

It seems possible that Bede had access to a manuscript containing short medical tracts similar to those in existing manuscripts, such as St. Gall 751,[20] which includes these two epistolae, tracts on weights and measures, on wines, on prognostics of life and death, and various other treatises attributed to Hippocrates, Galen and the like. All of these are very common and are found with variations in many manuscripts of the ninth century and later. A similar manuscript might well have been obtained from the continent by Benedict Bishop while building up the library at Monkwearmouth and Jarrow.

Bede's interest in medicine seems not to have been a purely intellectual exercise, as elsewhere in his writings he prescribes crocus for fever,[21] and mustard for a cold in the head,[22] and the pepper he bequeathed on his deathbed may well have been used for medicinal purposes, since it is frequently prescribed in remedies.

The pseudo-Apuleius text or the herbal of Dioscorides was evidently known in England in the mid-eighth century, for Cyneheard, bishop of Winchester between 755 and 766 wrote to Lull in Germany asking for secular works of science, "ut sunt de medicinalibus, quorum copia est aliqua apud nos, sed tamen pigmenta ultramarina, quae in eis scripta conperimus, ignota nobis sunt et difficilia ad adpiscendum".[23] Since some of the herbs and drugs prescribed in these texts are of eastern Mediterranean origin it would be difficult to obtain

---

20. B. 133
21. Bede, Cantica Canticorum Allegorica Exposito iv, 14, c 1146D
22. Bede, In Lucae Evangelium Exposito v, 17 c 540B
23. Haddan + Stubbs, Councils and Ecclesiastical Documents Vol. III 1871) p. 432

Oxford,/

them in England, but it is interesting to note that the Winchester medical books were used as practical manuals, and not just for the academic study of medicine.

It is also very frustrating not to know which were the many (copia) books of medicine which Cyneheard had at Winchester but they were presumably similar to the eighth century texts found on the Continent, such as B.N. lat. 9332,[24] which contains compilations from Oribasius, Alexander of Tralles and Dioscorides de materia medica, or Bamberg L III 8[25] which has a number of short treatises on ethics and etiquette, weights and measures, the Egyptian days, dietetic calendars, and various recipes. The eighth century moreover, was the period of the Anglo-Saxon missions to Germany, and was the century par excellence for the exchange of books and scholars. Many of the surviving letters include thanks for books received and requests for others.[26] This would lead one to expect that the sources available on the Continent might be equally readily available in England at that time.

It is possible also that some manuscripts were obtained via Ireland, since relations were extremely close. Bede records that in the seventh century many Englishmen, "both nobles and commons" travelled to Ireland to study, or to take up the monastic life, and that the Irish "provided them with books to read, and with instruction".[27] However, the only Irish medical manuscripts which survive, such as Berne 363,[28]

---

24. B. 31
25. B. 48
26. e.g. letters vii, xix, xii, xxvi, lix, lx etc. in Letters of St. Boniface op. cit.
27. H.E. iii. 27
28. B. 123

which was written by a colony of Irish monks at Milan, and a fragment of a text from Leyden,[29] are of the ninth century and include exactly the same material as elsewhere. It is difficult therefore to postulate any Irish influence on English medicine, and Bonser has suggested from his work on the magical elements that such influence was negligible.[30]

No manuscripts of the texts referred to by Bede and his near contemporaries have survived in England from the pre-Viking period, and they were presumably lost or destroyed in the Danish raids. The earliest texts now extant date from the period of the revival of learning instituted by Alfred, when books "most necessary for all men to know"[31] were translated from Latin into Old English. The major medical texts were possibly translated during the course of this revival, as they are all written in the vernacular.

The earliest surviving manuscript (B.M. Royal 12D.xvii) contains a text known as the Leechbook of Bald, so called from the colophon at the end of the first part. It consists of two books, one dealing with external ailments, starting from the head and working down to the feet, and the other dealing with internal disorders. A third Leechbook in a similar style was originally a separate work, so the scribe must have been copying from two different manuscripts of an earlier date. The text is in the same hand as the 922-955 annals in the Parker Chronicle, indicating that it was probably written at Winchester sometime during that period.[32]

---

29. Whitley Stokes, "A Celtic Leechbook", Zeit. Celtische philologie 1 (1897) pp. 17-25
30. W. Bonser, "The dissimilarity of ancient Irish magic from that of the A-S" Folklore 37 (1926) pp. 271-88
31. Preface to Gregory's Cura Pastoralis ed. H. Sweet E.E.T.S. (1871)
32. Ker. No. 264

What is significant about the Leechbook of Bald is that it is not simply a direct translation from a single Latin source, but that it is an English compilation, drawing on numerous sources, and in fact embodying the best medical literature available in the West. Talbot has shown that it contains passages from Paul of Aegina, Alexander of Tralles, Philagrios as incorporated in Alexander, and a fragment of Antyllus preserved in the work of Oribasius[33] which has an interesting description of an operation on the liver. It also includes more than forty passages from the so-called Petrocellus text, alleged to be a Salernitan compilation, but in fact existing two centuries earlier than the rise of Salerno. The oldest manuscript of the text is ninth century and was at one time in the possession of the monastery at Echternach, an Anglo-Saxon foundation.[34] It is even possible, though difficult to prove, that the Petrocellus text was an Anglo-Saxon compilation. It was certainly not uncommon in Saxon circles, as the Leechbooks show.

In addition to these it is possible to trace another important source for the Leechbooks. Leechbook II contains a long section of forty-one "crafts" concerning gynaecology. The text itself is unfortunately lost but the chapter headings still survive, and show that the problems dealt with were: obstruction of the naturalia, sterility, miscarriage, retention of urine, retention of secundinae, haemorrhage, mental unbalance, enlargement of the womb, hysterical aphonia, and other disorders. There is no

---

33. Talbot, p. 18
34. C.H. Talbot, "Some notes on Anglo-Saxon medicine", Med. Hist 9 (1965) pp. 156-69

comparable material in any of the other compilations available to the Anglo-Saxons, and Talbot has suggested that it came from an abridgement of Hippocrates' De mulierum affectibus, which deals with the same problems, and is found in a ninth century manuscript, originally at Corbie.[35] There are suggestions in this manuscript, such as the substitution of the letter r for s and vice-versa, that the Corbie monks may have been copying an exemplar written in an insular hand, presumably obtained from some Irish or Anglo-Saxon centre on the Continent. A late eleventh century manuscript (B.M. Sloane 475) contains a better text of the same treatise, and internal indications show that it was based on earlier English originals, since it includes, for instance, a circle of Pythagoras not known in England after 970 when it was copied into the Leofric Missal in a different form.[36]

The evidence of these two manuscripts, combined with the material from Leechbook II, make it probable that the Hippocratic treatise was known in England in the ninth century. The other gynaecological fragments occurring in Anglo-Saxon manuscripts such as the prognostication of the sex of the child, the formation of the foetus, the diagnosis of pregnancy and so on, all conform to the material found in the fragments which surround the original Hippocratic text.[37]

Another Anglo-Saxon compilation from various sources is contained in a text known as the Lacnunga, which dates

---

35. Leningrad Codex lat. F.v.VI.3; B. No. 145
36. C.H. Talbot, "A treatise on gynaecology in the Sloane collection". Unpublished article.
37. Talbot, p. 20

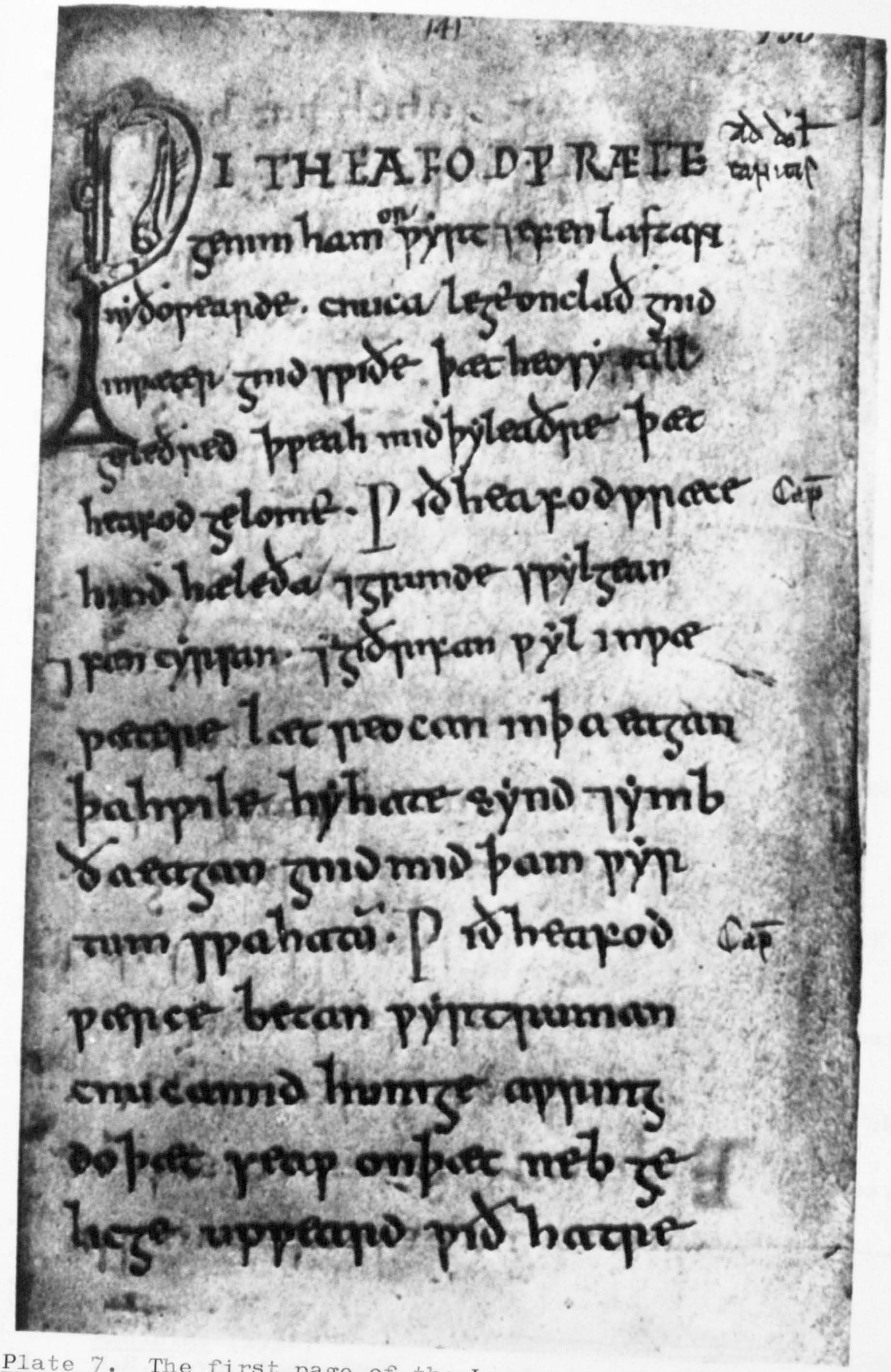


Plate 7. The first page of the Lacnunga from B.M. MS Harley 585.

from the late tenth century.[38] It is however, of a rather different character from the Leechbooks, since it includes a large element of magical remedies and charms. It is not proposed to discuss the magical element at any length, because this has already been dealt with "adequately, if not excessively, by those whose intention has been to denigrate Anglo-Saxon medicine".[39] Unfortunately, since the Lacnunga is the only text which has been re-edited[40] since Cockayne's work in the 1860s, it has been given undue prominence, and has even been described in a recent general work by Loyn[41] as the "key" text for the study of Anglo-Saxon medicine, a description which must seem absurd to anyone who has considered the medical texts as a whole. He speaks more truly than he knows in saying the "Lacnunga can scarcely be held up as a tribute to Anglo-Saxon medicine".[42]

It should also be pointed out that the medical (as opposed to purely magical) sections of the Lacnunga draw on sources such as Pseudo-Apuleius and more particularly, the Leechbooks. There are in fact two lengthy sections from Leechbook I incorporated in the text, in addition to twenty or more single remedies scattered throughout.

The first section is a series of remedies for erysipelas which covers folios 168a-169a.[43] The compiler has copied the heading from the corresponding section in Leechbook I,[44]

"for every sort of eruptions and seizures and dire diseases;

---

38. Ker. No. 231 MS Harley 585
39. Talbot, p. 21
40. J.H.G. Grattan + C. Singer, Anglo-Saxon Magic and Medicine (1952)
41. H.R. Loyn, Anglo-Saxon England and the Norman Conquest (1962) p. 286
42. Ibid.
43. Remedies xciv—cvi in Grattan + Singer's edition
44. Lbk. I xxxix

eight and twenty (remedies)", but after copying out thirteen remedies he has stopped at the bottom of a page and then continued with a different topic.

The second section is rather longer and is part of the eleventh century additions to the text. It starts at the bottom of folio 188a with remedies for the cough: "For a cough, how variously it befalleth a man, and how it is to be treated:" which corresponds to section xv in Leechbook I. At the bottom of folio 188b the text breaks off in the middle of a remedy, and a whole folio is missing. The next surviving page begins with a semi-Christianised charm (clxxxiii) and then continues with a group of remedies for heartache (clxxxiv-clxxxviii), also from Leechbook I.

What appears not to have been realised by the editors of the text is that the missing folio also contained material from Leechbook I. There the section on the cough consists of ten remedies, of which only the first three survive in the Lacnunga. The next section (xvi) contains four remedies for pain in the breast, and is followed by the remedies for heartache which are included in the Lacnunga. The missing cough remedies and the section on breast pain make up precisely the amount of material required to fill one complete folio of the Lacnunga MS, and the likelihood of their presence is confirmed by the fact that the first folio (f. 189a) after the lacuna has as its top line the single word "geþicge" - the final word of paragraph xvi in the Leechbook. It thus seems likely that the Lacnunga originally included the whole of sections xv, xvi and xvii from Leechbook I, an extract which covered five and a half sides of text.

The slight variations in the wording, the addition of

the charm against heartache (clxxxiii) and the omission of one other remedy all suggest that the compiler of the Lacnunga was not copying from the extant version of the Leechbooks, but from a different copy, or at least from a substantial portion of it. His exemplar seems only to have included the first Leechbook, since there are no remedies from Leechbook II in the Lacnunga.

The introduction to the section on the cough, which gives its causes and its method of treatment, is derived from Alexander of Tralles, according to Cockayne,[45] so that even an apparently debased text like the Lacnunga has its origins in classical medicine.

Moreover, while not attempting to explain away the magical and pagan elements in the text, it is easy to appreciate how they came to be there. At a time when most medicine was still in the hands of the Church religion and medicine were combined to produce physical and spiritual healing. The distinction between the two was often rather blurred. An ecclesiastic giving a blessing to a sick man, or pronouncing an exorcism, was performing a ritual of healing as well as a normal clerical function. A doctor who recited a charm over a sick man or who added the names of the Evangelists or a few Pater Nosters to increase the efficacy of a remedy seemed to be acting in much the same way. The difference between religion and magic is often a matter of which side one is on, and the substitution of Christian saints for pagan deities allowed a certain amount of pagan magic to be harmlessly absorbed into medicine, probably without much

---

45. T.O. Cockayne, op. cit., Vol. 2 p. 56

consciousness of its real origins.

In addition to the Leechbooks and the Lacnunga texts there are also English translations of the Herbal of pseudo-Apuleius. Though this is a straightforward translation of a single Latin text, rather than a compilation, even here the translator has been unable to resist the temptation to add new material. In the section on yarrow, for instance, only the first five of the sixteen paragraphs of remedies are found in the original version.[46] This text seems to have been popular in England, and three copies[47] of it survive from the Anglo-Saxon period (one being the same manuscript that contains the Lacnunga text),[48] and others were made in the twelfth and thirteenth centuries. Associated with these herbal texts was a small treatise known as Medicina de Quadrupedibus by Sextus Placitus. As the title suggests, the remedies are all from animals, and have been described by Singer[49] as "disgusting" and "nauseating". However, many of them have been taken from Galen and his contemporaries, and when it is considered that such things as crocodile dung and burnt mice were used as cosmetics in the classical period it is not surprising that the Anglo-Saxons continued in the same tradition.

The most recent editor of the Medicina de Quadrupedibus has suggested that the original translation was probably written in the Anglian dialect, and that the "numerous omissions and mistakes in the translation which betray a poor knowledge

---

46. ps.A. xc
47. Cotton Vitellius C iii; Harley 585; Bodleian, Hatton 76
48. Harley 585
49. Introduction p. xxi to reissue of T.O. Cockayne, op. cit., (1961)

Plate 8. Scorpion and snake fighting, from B.M. MS Cotton Vitellius C.III, an Anglo-Saxon work of about 1050. (From C.H. Talbot, Medicine in medieval England (1967), plate I.)

of Latin, may be regarded as an indication that the work was done in the period anterior to the revival of learning under King Alfred, probably somewhere in the ninth century".[50] A ninth century manuscript of English origin, and containing the ps. Apuleius and Sextus Placitus texts, still exists in Germany.[51] The texts are in Latin, but show that the material was well known in England at that time.

It is difficult to say whether the popularity of the ps. Apuleius text is apparent rather than real when so few manuscripts survive. A beautifully illustrated text such as Cotton Vitellius Ciii would have a better chance of survival than the small, unillustrated working manuals that are some of the other medical texts. Quite a number of the herbs described are of Mediterranean origin and unknown in England, and in places the English text transliterates the Greek name for a herb and gives no English equivalent, suggesting that it was impossible to identify it. But the fact that it was translated from Latin into English indicates that it had some importance, and remedies from it are transplanted into other manuscripts, so it was obviously put to use.

Another translation into English is that of a text known as the Peri Didaxéon, which survives only in a very late text,[52] and is written in a Middle English form.[53] Its Old English origins are therefore rather doubtful. It was thought to be important in the past because it is a partial translation of the Petrocellus text and was therefore supposed to represent the first introduction of "rational" Salernitan

---

50. H.J. de Vriend, The Old English Medicina de Quadrupedibus (1972) p. liv
51. Codex Hertensis 192, B. No. 55
52. B.M. Harley 6258B, post 1200 AD; Ker. p. xix
53. H.J. de Vriend, op. cit., pxxviii n.; Ker. p. xix

medicine into England; but, as mentioned before, Talbot has shown that this text has no connexion with Salerno, and was already known to the Anglo-Saxons in the ninth century. The translation of the Peri Didaxeon text is thus of little significance in the development of English medicine.

The occasional text in Latin also survives from England. The eleventh century manuscript of Hippocrates[54] has already been discussed, but here is a tenth century manuscript of Quintus Serenus, Liber medicinalis,[55] now in France, which is of English origin, and also numerous short tracts on bloodletting, dietetic regimens, prognostics, and so on, both in Latin and Old English.[56] These short tracts are similar to those found in the composite medical manuscripts on the Continent, but in England they are often included in other manuscripts, usually containing ecclesiastical texts. For instance M.S. Harley 3271 contains Aelfric's Grammar, and Cotton Vitellius E xviii contains a psalter and canticles. The rules and prohibitions on bloodletting and diet would have been observed by the monks in the normal course of their monastic life, and the treatises are therefore included with the other texts rather than isolated in separate medical manuscripts.

This brief survey of the medical texts gives an idea of the range of material available to the Anglo-Saxons, and also indicates the importance of the painstaking work done by Charles Talbot in tracing its sources. Fifteen years ago Singer was able to write, "the Leechdoms should be regarded as an end

---

54. Sloane 475
55. B.N. Fonds. lat. cod. 4839. B. No. 20
56. e.g. Harley 3271, B. No. 76; Camb. U.L. cod. Gg. V. 35, B. No. 70; St John's College, Oxford M.S. 17; Cotton Titus D. xxvi, xxvii, Ker. No. 202; Cotton Vitellius E xviii, Ker. No. 224

not a beginning. They provide good examples of the darkest and deliquescent stage of an outdated culture".[57] For him Anglo-Saxon medicine was in its death throes until the introduction of Salernitan influence in the twelfth century. Now that view seems completely untenable, and largely due to Talbot's detailed researches. The Anglo-Saxons have been shown to have known and used the same classical texts as were available elsewhere in Western Europe, and they did not merely copy them blindly, but extracted from them and made them into fresh compilations. The compiler of the Leechbooks, for instance, used more than half a dozen major texts and exerpted from them at will, using his own knowledge and experience and on occasion even adding material of his own.[58] The result is that the descriptions of diseases are sometimes clearer and more detailed than their classical originals.

Moreover, the Leechbook of Bald is not an exceptional work in the midst of a lot of charms and folk remedies. Rather it appears to have been in the position of the standard medical text, as far as one can tell from such deficient sources. Three early eleventh century texts[59] contain extracts from it, and a late twelfth century manuscript[60] has four fly-leaf remedies from the same source. Even the despised Lacnunga draws extensively from the Leechbooks.

The achivement of the Anglo-Saxons should thus be recognised for what it is. They were producing their own medical

---

57. p. xlvii of Introduction to re-issue of T.O. Cockayne, op. cit. (1961)
58. C.H. Talbot, "Some notes on Anglo-Saxon Medicine" Med. Hist.9 (1965) pp. 156-169
59. Cotton Otho B. xi + Otho B. xii + Addit.3465, Ker. No. 180; Harley 55, Ker. No. 225; B.M. Cotton Galba A. xiv + Nero A. ii, Ker. No. 157
60. Harley 6258 B

literature in the vernacular, and drawing on the best medical sources available in the West at that time. It is difficult to see how this can be considered as an "end, not a beginning". Charles Talbot should have the last word:

> "Not only does this evidence destroy the myth of Salernitan medicine having been far and away ahead of Anglo-Saxon medical practice and theory, but it shows, contrary to all previously held views, that England was, in the ninth and tenth centuries, in no way inferior to its continental neighbours in the assimilation of classical medicine." 61

---

61. C.H. Talbot, op. cit., p. 169

CHAPTER 3: MEDICAL THEORY AND THE ORIGINS OF DISEASE

Most of the medical manuscripts which survive from the Anglo-Saxon period contain little information on medical theory and are designed as practical manuals for physicians. This is in part due to the means by which late Classical medicine was transmitted to the West. As mentioned in the previous chapter the compendious works of Greek writers were translated into Latin and in the process abbreviated and summarised to reduce them to a more manageable form. The theoretical portions of such works were, not surprisingly, among the first sections to be omitted, and thus did not pass into western translations.

However, enough information survives for it to be clear that Classical doctrines such as the doctrine of the four humours, the four temperaments and so on were incorporated into early mediaeval medicine and formed the basis of its medical theory. A few short works on theory are found in England, a particularly interesting group being in a manuscript from St. John's College, Oxford, M.S. 17, dating from about 1085. The complete text forms a kind of scientific encyclopedia, and the medical portion includes sections on the constitution of the body from the four humours, the regimen of the four temperaments, prognostics of life or death, the relation of the fevers to the humours and the principles of pathology, as well as chapters on bloodletting, various remedies, a glossary of herbs, a table of weights and measures and so on. According to Charles Singer, who published the manuscript,[1]

---

1. "A review of the medical literature of the Dark Ages", Proc. R. Soc. Med., 10 pt. 2 (1917) 107-60

this group of texts forms "the only known western attempt of that period to explain in detail the origin and cause of disease".[2] He sees the texts as being among the first in England to be influenced by the teachings of the medical school at Salerno, and therefore moving towards a more "rational" approach to medicine.

According to Talbot, however, all the texts are typical of pre-Salernitan medicine:

> "All the treatises contained in this manuscript reflect a type of medicine current in Europe before the rise of the South Italian school: the short treatise on phlebotomy can be paralleled in Bede, De minutione sanguinis, belonging to the eighth century; the passage on the four humours was known from the ninth century onwards; the regimen for the four temperaments, though having a counterpart in a text attributed to Giovanni Monaco, a pupil of Constantine, is also much older than the Salernitan school; whilst the prognostication of life and death derives from the various versions of the Prognostica attributed to Hippocrates or Democritus. The same remarks may be applied to the table of weights and measures, recipes for plasters and electuaries and other elements in the manuscript. The list of herbs, confidently asserted to be derived from the Alphita, and 'wholly Salernitan', has on the contrary, very little in common with it. In any case, the Alphita is probably French in origin." 3

This group of texts may thus be regarded as typical of the kind of theoretical material available to the Anglo-Saxons, and the doctrine of the four humours which it expounds is basic to Anglo-Saxon medicine. This doctrine is found in Isidore of Seville's medical writings, in Bede, in Byrhtferth's Handboc, in the introductory chapter to the Peri Didaxeon text, as well as in the St. John's College manuscript. Just as there were four seasons of the year (spring, summer, autumn, winter), four elements, (earth,

---

2. Ibid., p. 156-57
3. Talbot, p. 45

air, fire, and water), four ages of man (childhood, youth, maturity and old age), so there were also four humours of the body, and as Bede explains:

> "Man himself, who is called by wisemen a microcosm, that is, a little world, has all these qualities in the temperament of his body, and each indivdual humour dominates the body at different times. Blood, which governs the spring, is wet and warm; red choler which rules the summer, is hot and dry; black bile which rules autumn, is dry and cold, and phlegm, which governs winter, is cold and wet. Also blood is strongest in infancy, red choler in youth, melancholia in maturity, that is bile mixed with black blood, and phlegms rule in old man." 4

The St. John's College manuscript develops this idea somewhat further:

> "The four humours rule each in its own place. Thus blood rules in the right side, especially in the hepar, which we call jecur (liver), as well as in the heart. The red bile rules also in the right side, and notably it fills the gall bladder. Black bile rules in the left side where the spleen lies. Phlegm reigns partly in the head, and partly in the urinary bladder ...
>
> Again each humour has its own place in the body where it is exhaled, blood through the nose, red bile through the ears, black bile through the eyes, phlegm through the mouth.
>
> The four humours produce special types of temperament, thus: Blood makes a man of goodwill, simple, moderate, reposeful and sturdy. Red bile [makes a man of even temper, just, lean of figure, a good masticator of his food, and of strong digestion. Black bile]... makes a man irascible, greedy, avaricious, sad, envious and often lame. Phlegm makes a composite type, watchful, introspective, and growing early greyheaded.
>
> The body has four qualities and four tissues, to wit bones, nerves, vessels and flesh. The qualities are cold, heat, moistness and dryness. The desires are four: hunger, thirst, concupiscence, and repose.
>
> Also there are four natural processes: eating, drinking, generation, and sleeping." 5

---

4. Bede DTR xxxv, own translation p. 247 in C.W. Jones ed. Bedae: Opera de Temporibus (Cambridge, Mass., 1943)
5. Singer, op cit., p. 128-9

The individual temperaments have special regimens prescribed in order to counteract the dominance of the particular humour in the body.

> "for those in whom red bile rules we should order bloodletting in spring and purgation in autumn. There is nothing better than a really good purge ...
> Black bile gives rise to melancholy, which produces internal lesions and indigestions. For these nothing is better than abstinence and suitable diet. Such may take mutton but not goat, hare and pork, for these increase melancholy, especially pork which is a very poison to the melancholic and causes weight on the stomach. Beef may be taken ..." 6

In addition to the inherent constitution of the body and the regimen required to control it, one is also expected to vary one's diet and behaviour in accordance with the individual humour dominant at each particular season of the year. Bede quotes a detailed regimen in <u>De Temporum Ratione</u>:

> "At this time [i.e. the ninety days from 25 December to the Spring equinox] phlegm dominates mankind, from which catarrh frequently grows in men, and watering eyes, and pains in the sides, mist before the eyes, humming in the ears, and they can smell nothing. At such times therefore one should use hot, irritating and good foods, such as pepper and mustard, and should wash one's head rarely, take regular purges, drink wine, and indulge in sexual intercourse ..." 7

These restrictions on behaviour were necessary to maintain the balance of the humours in the body and with it one's health, since any disturbance of the balance of humours led to disease. There were considered to be twelve pounds of humours in the body, blood being six pounds and the other humours making up six pounds between them. If blood exceeded the other humours elephantiasis was the result; if the other humours exceeded the blood dropsy was caused. To cure these

---

6. Singer, <u>op. cit.</u>, p. 129-30
7. Bede, <u>DTR</u> xxx in C.W. Jones, <u>op. cit.</u>

and restore the correct balance the remedy was bloodletting on the one hand and purging on the other.[8]

It was thus possible to work out the correct means of treating an illness by considering the date of birth and the innate temperament of the patient, together with the time of year at which the illness occurred. Once the particular humour causing the disease had been identified the treatment was perfectly straightforward, and consisted of means to reduce the dominance of the humour. In the post-Conquest period this system became much more formalised and involved knowledge of considerable astrological lore, the phases of the moon and the tides, and so on. As a result many medieval physicians carried with them a vade mecum containing a calendar, canons of the eclipses of the sun, canons of the eclipses of the moon, tables of planets, rules for phlebotomy, and an analysis of urines, to help them with their diagnoses.

> "These manuscripts consisted of seven or eight pieces of parchment, folded across the middle and then folded again into three sections, so that the outward appearance showed only narrow strips each measuring about seven inches long and two inches wide. Each one of these strips was devoted to one aspect of a diagnosis, the actual date when an illness began, the position of the sun and moon during its continuance, the planet governing the part of the body affected, the actual vein which must be cut, and the twenty-four kinds of urine with their significance. Some of these manuscripts had additional elements, such as the Sphere of Apuleius, by which the medical practitioner through taking the patient's name, giving a numeral quantity to each letter and subtracting thirty from it, could discover whether the person would live or die. Some even had a table for calculating what would happen in the future, so that it became possible not only to foretell the weather, but also to find stolen property and lay hands on the thief ...

---

8. Singer, op. cit., p. 130, St. Johns M.S. 17

> ... It will be seen then, that within a small compass the physician possessed all the essential information he was likely to need when first called to examine a patient. By flipping his finger through the various tables he could find out very quickly what ailment the man was prone to, how serious, through the intervention of the planets, it was likely to be, and what immediate advice he should give." 9

This instant diagnosis and prognosis was no doubt reassuring to doctor and patient alike, and it is interesting to note that though these ready reckoners are still found in the fifteenth century many of their details, such as the analysis of urines, the instructions for bloodletting, the sphere of Apuleius and so on, were already known in the Anglo-Saxon period, indicative of how tenacious these ideas were, and how slowly new developments in medicine were absorbed by the ordinary medical practitioner.

The concept of the humours as the cause of disease did not merely involve the establishment of man's relationship with his external universe to point the means of treatment, though it was this rather simplistic view which later became prominent. One section in St. John's M.S. 17, goes beyond this,[10] and contains a detailed discussion of the origin and cause of disease through the action of the humours in different parts of the body, including also an elaborate symptomatology. Since such a statement of principles is unusual it is worth quoting at some length:

> "The body of man is divided into four parts: the head, the chest, the belly and the bladder. Spring is the enemy of the head, summer of the chest, autumn of the belly, and winter of the bladder.

---

9. Talbot, p. 126-128
10. f.175^{v} - 176^{r}

Now the nature of man and of beasts comprises warm and cold, dry and moist. Cold possesses the viscera by which we exhale, and heat the spirit by which we live and feel; dry are bones which give firmness to the body to support the labour of our life, while through the viscera run the vessels with their moisture controlled by blood.

It is this blood which sustains the animal life but the spirit is the breath of life. The bones are provided with nerves, which furnish the strength of the body.

When blood abounds it brings health, and from it sanies is produced, such as we see in incised wounds.

A substance is also produced called acid or bitter bile, which is regarded as the substance of disease for it excites the production of heat.

Phlegm produces chafing and pain in the intestines. It causes distension, which inflates the body so that it seems as though it would burst.

Blood becomes superabundant by reason of too much food and drink and is corrupted by its ill concoction, and where it passes beyond its natural limits it induces some bodily ailment; and in whatever part it settles it becomes corrupted and exhausts and injures the body. Thus corrupt blood causes the mouth to burn, vitiates the breath, and makes it stink. For when the blood is healthy it contains the breath /or spirit/ and maintains the body so that it may support either heat or cold. But when it is superabundant it produces sanies or bile, as it is called, which exhausts the spirit, and this gives rise to the bad odour ...

The four parts of the body have their seat in the head, the chest, the belly and the bladder ...

When a disease originates in the head we get aching in that part and the brows are heavy, the temples project, there is ringing in the ears and running of the eyes, while the nostrils are filled with a smell. When any of these occur, the head should be purged with a bunch of hyssop or conula or bubula, boiled to the third degree. Water should be held in the mouth and the head kept warm to promote the flow of phlegm. Should this be neglected, trouble in the eyes or teeth, or struma of the parotids, or diseases of the fauces and neck are likely to arise ...

When a disease arises in the chest the head sweats, the tongue swells or there is a bitter taste in the mouth or the tonsils are painful. There is constant yawning, yet no sleep or rest. There is torpor of the limbs and a disturbed spirit. The body itches, hands and arms tremble constantly, and a dry, hacking cough is produced. A bad sign it is when in such a state the patient vomits on awakening, or before food, or in the bath. But it is better if when fasting he vomits bile, for bile, as I have explained, is the mother of morbidity ...

When a disease arises from the belly these are the signs. The belly is turned and disturbed and suffers much pain, food and drink seem bitter, the knees sink, the loins are heavy, the shoulders are contracted, the whole body aches, the feet drag, the legs are weary, the kidneys are painful, and there is fever ...

When a disease arises from the bladder these will be the signs. They will seem full and easily sated, and inflation of the belly will follow. There will be much hiccough and appearance as of yawning. There will be stupor and groaning, and dark-coloured urine difficult to pass, and swelling of the private parts and formation of stone ..." 11

The manuscript from which this passage is taken dates from the second half of the eleventh century as we have seen, but a very similar text was evidently known to the compiler of the Leechbooks in the ninth century, since the section on disease of the belly is quoted almost verbatim in the second Leechbook:

> "When wamb disease is present then the tokens are: the wamb turneth itself and is fevered and feeleth sore when the man eateth meat, and prickings and loss of appetite for meat. The knees are slow, the loins are heavy, and there are spasms between the shoulders, and all the body by piecemeal is heavy, and the feet are tardy, and the muscles of the loins are sore ..." 12

The four parts of the body, the head, the heart, the wamb,

---

11. Singer, op.cit., p. 138-141
12. Lbk. II, xxv

and the bladder are also referred to in a later section of Leechbook II,[13] and the humoral pathology involved seems to have been basic to Anglo-Saxon medicine, since it is found in all the major texts,[14] and particularly in Leechbook II, which, dealing with internal disorders, lends itself more readily to a detailed discussion of symptoms.

The humours are not the sole cause of disease, but are often quoted as one of a group of causes, particularly in the case of specific ailments. For instance, in a discussion of the causes of hiccup or hicket:

> "/Hiccup/ cometh from the very chilled maw, or from the too much heated maw, or from too mickle fulness, or of too mickle leerness /emptiness/, or of evil humours rending and scarifying the maw. If then the sick man by a spew drink speweth away the evil biting humour, then the hicket abateth." 15

The treatment consisted of means to dispose of the excess humour, either by vomiting, as suggested by the above reference, or by purging; or in the case of excess blood, by bloodletting. The decision between vomiting and purging as a means of egress depended on which part of the body was affected: "if they be low down, one must get rid of /the humours/ by wort drinks, through purging of the womb; if they mount up high one must get rid of them by vomitings."[16] The other area of treatment depended on the doctrine of contraries, that is, a cold humour required hot remedies, while an inflamed humour required cold remedies:

> "If the disease be caused by mickle heat, then shall one cure it with cold leechdoms; if it cometh of cold causes then shall one cure it with hot leechdoms,

---

13. Lbk. II, xxxiv
14. Lbk. I i, ii, xviii, xxxv, xlii; Lbk. II i, xv, xvi, xxi, xxv, xxvii, xxviii, xlvi, lvi; ps.A. cxxv, cxli; Lacn. clxxx etc.

> of either shall advantage be taken, and they shall be mixed into a mixture that may heal the body and have an austere efficacy in it." 17

The most popular means of treatment, nonetheless, was bloodletting, not only as a specific remedy, but as a general means to health. It was regarded as a great panacea for all ills:

> "It contains the beginning of health; it makes the mind sincere, it aids the memory, it purges the bladder, it reforms the brain, it warms the marrow, it opens the hearing, it checks tears, it removes nausea, it benefits the stomach, it invites digestion, it strengthens the voice, it builds up the sense, it encourages venery, it enriches sleep, it removes anxiety, it nourishes good health, it removes poisonous matter, it gives long life and great endurance, it cures all noxious humours, acute fevers and rheumatic pains, and drives out pestilential afflictions." 18

Already by the seventh century bloodletting was practised in the monasteries as a regular health measure, as indicated by Bede's story of John of Beverley and the nun with the swollen arm,[19] and in the post-Conquest period a seven week cycle was in operation in some monasteries. Monks who had been let blood were allowed two days rest, and freedom from attendance at services and restrictions on diet while they recovered.[20] Some monks used the period of bloodletting as an excuse for a holiday, and were often criticised for this, as in the following letter to a monk from Herbert of Losinga (1050-1119), Bishop of Norwich:

---

15. Lbk. I xviii, 1
16. Lbk. II xxvii
17. Lbk. I i, 13
18. St. John's College, Oxford M.S. 17; Singer, op. cit., p. 131
19. H.E. v.3
20. J.W. Clark, Observances in Use at the Augustinian Priory at Barnwell (1897) p. 201

Cambridge,

Plate 9. Cupping, from B.M. MS Sloane 2435 (13th century). Heated cups or horns were placed on light incisions or scarifications as a moderate form of bloodletting. (From Loren MacKinney, *Medical Illustrations in Medieval Manuscripts* (1965), fig. 56)

> "... you are, they say, seldom seen in the cloister, often in the parlours, slow in resorting to the church, swift in resorting to the grange, you are constantly getting leave to have your blood let, constantly getting leave to have a bath ..." 21

The routine of bloodletting was carefully worked out, and subject to many restrictions. An eighth century text, de minutione sanguinis, attributed (though doubtfully) to Bede, gives details of the best time of the year in which to let blood, the times when purging would be more appropriate, the times at which bloodletting is prohibited altogether, and the details of which vein should be opened to cure particular ailments. This text is frequently quoted in medical manuscripts and forms the basis of the longer text on bloodletting in the eleventh century manuscript from St. John's college.

Bonser has suggested that before the discovery of the circulation of the blood, it was supposed that the blood was stationary.[22] This seems not to be correct, as the following quotation about the function of the liver indicates:

> "[The liver] is the material of the blood, and the house and the nourishment of the blood; when there is digestion and the attenuation of the meats, they arrive at the liver, and then they change their hue and turn into blood; and it casteth out the uncleannesses which be there, and collects the clean blood and through four veins principally sendeth it to the heart and also throughout all the body as far as the extremities of the limbs." 23

Though this description stops short of understanding the principle of general circulation of the blood, it certainly implies that blood moved about the body, rather on a backwards and forwards movement. If blood is created through the

---

21. E.M. Goulburn + H. Symonds, The Life, Letters and Sermons of B. Herbert of Losinga (Oxford, 1878)
22. Bonser, p. 294
23. Lbk. II, xvii

digestion of food, the amount of blood in the body must be constantly on the increase, unless deliberate measures are taken to reduce it. This would explain the reference in the text quoted earlier[24] to blood becoming superabundant because of too much food and drink. Since too much blood in the body gives rise to disease it is necessary to let blood at regular intervals throughout the year, rather than just at one specific season. There are, however, particular times of the year when bloodletting is most efficacious. According to the text attributed to Bede the best time to let blood is between the 25 March and the 26 May "because then blood is on the increase"; and the first Leechbook states:

> "There is no time for bloodletting so good as in early lent, when the evil humours are gathered which be drunken in during winter, and on the kalends of April best of all, when trees and worts first upsprout, when the evil ratten waxeth, and the evil blood, in the hulks or hollow frameworks of the body." 25

Concomitantly, other days are to be strictly avoided:

> "Bloodletting is to be foregone fifteen nights ere Lammas, and after it for five and thirty nights, since then all venemous things fly and much injure men. Leeches who were wisest have taught that in that month no man should either drink a potion drink, nor anywhere weaken his body, except there were a necessity for it ..." 26

> These days "are called the dog days after the dog star, and in them no purges should be given and no blood be let, since then the humours are mixed; only if jaundice should set in should a vein be opened and the superfluous or injurious blood be let." 27

Certain other days, known as the Egyptian days, were thought to be very unlucky. According to De Minutione Sanguinis:

---

24. p. 56
25. Lbk. I, lxxii
26. Ibid.
27. St. John's College Oxford M.S. 17, after Bede: Singer, op. cit., p. 130-133

> "There are many Egyptian days, in which by no means nor for any necessity should blood be let from man or beast, nor any potion given: but the three most important are: the eighth day before the Ides of April, the first Monday at the beginning of August and the first Monday after the end of December. On these days, as has often been observed, all the veins are full.
>
> If any man or beast has blood let on these days he shall either die straight-away or within three days, or else he will not survive till the seventh day; and if anyone takes a potion he will die within fifteen days. If any man or woman is born on one of these days he will die an evil death; and anyone who eats goose on these days will be deceased within fifteen days." 28

These same prohibitions are repeated in almost identical terms in the Lacnunga,[29] and there is also general agreement that the fifth, tenth, fifteenth, twentieth, twenty-fifth and thirtieth days of the moon are to be avoided,[30] the exception being Leechbook III, which states in flat contradiction:

> "For palsy, if the mouth be awry or livid ... let the man get bled every month, when the moon is five, and fifteen and twenty nights old." 31

Confusion really starts to arise when one considers the unlucky days in each particular month, since the tables in various manuscripts show very little correlation,[32] and several different systems seem to be in operation. The list in Cotton Caligula A.xv, an early eleventh century manuscript, is of interest, since it quotes the fourth day of the moon as a prohibited day "before the moon and the sea be in harmony"; and it will be remembered that this was the day referred to by

---

28. Bede, De Minutione Sanguinis in J.A. Giles, Patres Ecclesia Anglicanae (1843) Vol. 6
29. Lacn. clxxxix
30. Bede, De Minutione Sanguinis; Lbk. I, lxxii
31. Lbk. III, xlvii

John of Beverley in Bede's story of the nun who had been bled. The bishop says:

> "You have acted foolishly and ignorantly to bleed her on the fourth day of the moon; I remember how Archbishop Theodore of blessed memory used to say that it was very dangerous to bleed a patient when the moon is waxing and the Ocean tide flowing." 33

It seems likely that the system in the eleventh century manuscript was similar to the one used by Theodore. Cotton Caligula A.xv is interesting for another reason too, since it contains an account of a small medical experiment. The text begins by stating that there are two days in every month which are very dangerous for drinking a potion or for letting blood, "because there is one hour on each of those days, on which if any vein is opened, it is loss of life or long disease. A leech tested this doctrine, and let his horse blood on that hour, and it soon lay dead."[34]

Such independence of mind and willingness to test received opinion are not usually attributed to the Anglo-Saxons, so this little incident seems worth quoting for that alone.

Once the physician who wished to let blood from his patient had managed to find a propitious day on which to do so, he had then to decide on the correct vein from which blood should be let, in order to suit the particular ailment from which his patient was suffering. Bede gives a list of twenty-four veins at various places in the head, neck, arms, hands, ankles and feet, and relates them to such multifarious complaints as headache, toothache, swollen gums, "alienation", sore eyes,

---

32. e.g. Bede, op. cit.; Cotton Tib. A.iii, f. 30b; Cotton Calig. A.xv, f.126-127; Harley 3271, f.120-124; etc.
33. H.E. v.3
34. Cotton Calig. A.xv, f.126b, Cockayne, op.cit., Vol. III p.153

swelling of the spleen, gout, sciatica, frenzy, amenorrhoea, sterility, and swelling of the testicles.[35] However, it seems not to have been considered very important to find the right vein, as the following quotation shows:

> "If heat, or his capacity to bear it, forbid it not, let him blood from the left arm from the upper vein; if thou canst not find that, let him blood from the midmost vein; if thou canst not find that, let him blood from the head vein. Further, if that cannot be found, let him blood from the left hand, near the little finger, from a vein. If the blood be very red or livid, then must it be let flow more plentifully; if it be clean or clear, let it flow so much the less. Blood however, is so to be taken from the man as that his vital power may not be unsettled." 36

The ailment for which this remedy is to be applied is inflation of the spleen, and according to Bede's list the site from which blood should be let is the thumb, a position not mentioned in the Leechbook text, even among the many alternatives given! In general it seems that in the Anglo-Saxon period the routines for bloodletting were rather less formalised than they later became in the mediaeval period, when much astrological lore and other formulae were added. Among the Saxons greater variations of practice existed.

The concluding sentence of the above quotation urges caution in bloodletting, and this injunction is frequently repeated:

> "If inflamed blood and evil humour be in the milt, distending it, then shall the sick be thus let blood. If it seem to thee, that thou dare not do another greater leechdom, for the want of might in the man, or for want of digestion, or for old age, or for youth or for bad weather, or for diarrhoea, then wait till that thou may so do or dare." 37

---

35. Bede, de minutione sanguinis, ed. J.A. Giles, op. cit.
36. Lbk. II, xlii

Or again:

> "Then consider thou, notwithstanding, that all the aforenamed leechdoms and the afterwritten ones shall not be done at one too long season, but must have space and rest between them, whilom two days, whilom three; and when one lets him blood on a vein, on those days let none other leechdom be done to him, except about five days later or more." 38

Such evidence rather contradicts Bonser's assertion that bloodletting was applied "without consideration of the patient's condition",[39] and there are warnings elsewhere about the dangers of letting too much blood, and remedies to staunch the flow.[40] It is not known how much blood was taken at any one time, and without this information it is difficult to estimate the danger to the patient, but such evidence as there is suggests that bloodletting was carried out less irresponsibly than has sometimes been suggested.[41]

The basic concept behind the doctrine of the four humours is one of a balance of forces within the body. When the four humours are in harmony the body is healthy, but any disruption of the balance results in disease, which can be cured only when the natural order is restored. The causes of disease are thus primarily internal, though affected by external influences such as the seasons of the year and other natural rhythms of the universe which recur in man's own body.

There are, however, other ways of viewing the causes of disease, and the view that is most prevalent among the surviving pre-Christian concepts of disease is that illness is caused by

---

37. Lbk. II, xlii
38. Lbk. II, vii
39. Bonser, p. 295
40. e.g. peri did. 63; Lbk. II, xxv; Lbk. I, lxxii
41. e.g. N. Moore, The physician in English history (1913); Bonser, op. cit., p. 295

the invasion of the body by alien matter. There are many ways by which the body can be invaded. Man can be attacked by "flying venom", snakes, worms, toads and other poisonous things, and by evil spirits, elves, dwarves, sorcery and nightmares.

The Lacnunga, which contains a large number of pagan charms, includes a Lay of the Nine Twigs of Woden, which relates how Woden in his battle against the serpent smote it into nine pieces, each of which turned into a different-coloured, disease-bearing venom.[42] As an antidote against the venoms Woden also prescribed nine herbs, one for each.[43] The venoms are described as the "evil things that fare throughout the land", and seem to be the bearers of infectious diseases.

Other, more specific ailments are attributed to poisoning of one sort or another, and a charm against poison in the Lacnunga gives an interesting list of various poisonous beings;

> "By the hearing of Thy Name the serpent is stilled, and the dragon fleeth, the viper ceaseth to hiss and that toad, which is called Rubita, goeth quietly to rest; the scorpion is vanquished and the Regulus is conquered, the Spalangius ceaseth to work harm, and all venomous and hitherto ferocious creatures turn from their fierceness, noxious animals are cast in the shade, and all roots adverse to the health of man are dried up." 44

Not surprisingly, it is texts such as the ps. Apuleius with its east Mediterranean background, that include the greatest number of remedies against snakes, scorpions and poisonous spiders, but the Anglo-Saxons seem to have regarded

---

42. Lacn. lxxx
43. Lacn. lxxix
44. Lacn. lxvii

many animals, such as toads, as poisonous even before the influence of the classical texts.[45] The worm is the most frequently cited cause of disease, causing pain in the eyes,[46] the teeth,[47] the ears,[48] and all the orifices and internal organs of the body.[49] However, wyrm is a generic term, covering most snakes and reptiles as well as the more conventional worms, such as the tapeworm, so it is not always clear what is being referred to.

Of the evil spirits attacking man the elves are the most common, their chief means of assault being small arrows or spears, which punctured the skin and caused elfshot. A charm in the Lacnunga, is designed to remove these barbs from the flesh:

> "If herein be of iron a fragment
> Hag's work it shall melt away
> If thou were shot in skin, or shot in flesh,
> Or shot in blood, or shot in bone
> Or shot in limb, may thy life ne'er be shattered.
> Were it Aesir shot, or Elves shot
> Or Hag's shot, now will I help thee." 50

As well as causing elfshot, the elves also produced other diseases, such as elfhicket,[51] and water elf disease:

> "If a man is in the water elf disease, then are the nails of his hand livid, and the eyes tearful, and he will look downwards." 52

The remedies for these diseases consist mainly of complex herbal drinks and associated charms and religious rites. As one would expect, diseases caused by magical means are treated largely by magic, that is, religion, and ingredients such as

---

45. cf. N. Barley "Anglo-Saxon Magico-Medicine" J. Anthrop. Soc. Oxford 3 (1972) 68
46. Lbk. I, ii, Lacn. x
47. Lbk. I, vi
48. Lbk. III, iii
49. Lbk. I, xlvii-liv et passim
50. Lacn. cxxxv
51. Lbk. III, lxii
52. Lbk. III, lxiii

holy water, and moss from a rood cross are prescribed to help drive out the elf.

The extent to which evil beings were considered as a cause of illness can be seen in another remedy in the third Leechbook.

> "Seek in the maw of young swallows for some little stones ... put them on the man ... who hath the need. They are good for headache, and for eye work, and for the fiend's temptations, and for night goblin visitors, and for typhus, and for the night mare, and for knot, and for fascination and for evil enchantments by song." 53

It is apparent from this list that the whole concept of disease and the origins of disease was much broader among the Anglo-Saxons than it is today. As Garrison has emphasised:

> "If we are to understand the attitude of the primitive mind toward the diagnosis and treatment of disease, we must recognise that medicine, in our sense, was only one phase of a set of magic or mystic processes, designed to promote human well being, such as averting the wrath of angered gods or evil spirits, firemaking, making rain, purifying streams or habitations, fertilising soil, improving sexual potency or fecundity, preventing or removing blight of crops and epidemic diseases." 54

Though he was writing about a period considerably earlier, much of what Garrison says is still true for the Anglo-Saxon period, and explains why many texts contain what is now considered to be an irrational jumble of medical and non-medical material. For instance, Cotton Vitellius E. xviii,[55] a mid-eleventh century manuscript, contains in addition to

---

53. Lbk. III, i
54. F.H. Garrison, An introduction to the history of medicine, (Philadelphia, 1929), p. 20
55. Ker, No. 224

a psalter and canticles, a list of the three lucky days in the year for childbirth, a list of the three unlucky days for bloodletting, a charm for protecting bees against theft and directions for writing St. Columbkill's circle to keep bees, a charm to discover theft, remedies for ailing cattle and sheep, a charm for stock, and a charm for the fertility of the fields. Other manuscripts contain much the same mixture.[56]

The fact that these charms and other pre-Christian elements survive in manuscripts of the Christian period does not imply that the Church was lax or inefficient in rooting out pagan "superstition", but merely that it defined its boundaries in a different way from today. Though they understood a clear distinction between pagan and Christian, the Saxons did not distinguish between the natural and the supernatural in either the causes of disease or in their treatment of it. Nor did they distinguish between "rational" medicine and "irrational" magic. To attempt to do so in this study, or to suggest that the Anglo-Saxons should have done so themselves, is to introduce an alien and modern concept, and to consider only the rational elements (herbs, baths, heat treatment etc.), while dismissing or ignoring the religious elements is to fail to understand the philosophy on which the medical system was based.

In a sense the position of the Anglo-Saxons at the time of the conversion was not dissimilar to the position of the African tribes visited by Christian missionaries in the nineteenth century. In both cases the missionaries came from a superior and foreign culture, and medical knowledge, literacy

---

56. e.g. Cotton Caligula A.xv; Camb. Corpus Christi 41; et al.

and other technical skills were acquired with the acceptance of the Christian religion. Modern medicine, however, is scientific and has divorced itself from religion, and this in part explains why the primitive medical men still flourish alongside modern medicine in parts of Africa such as Nigeria,[57] because they seem able to answer certain spiritual needs of the community in a way western medicine cannot. The medical knowledge introduced into England in the Seventh century had not yet made its split with religion and was thus able to absorb many of the pagan concepts in primitive medicine - dwarves and elves became instruments of the Devil, pagan rites became prayers and masses, charms became Christianised, and the two systems were harmlessly combined. The fact also that in the Early Anglo-Saxon period virtually the only medical care available was through religious centres such as monasteries, further cemented the links between medicine and Christianity.

Christian and pagan magical rites are thus closely intertwined throughout the remedies in most of the texts, and particularly so in the Lacnunga. Nevertheless, the charms, amulets, incantations, prayers and so on need to be seen in perspective. Even modern medicine with its far more potent drugs still has a certain magical quality to it. Recent research has indicated that subjects in drug experiments who have been given dummy pills or placebos have often benefitted as much as those who have been give pharmacologically active drugs.[58] The important thing is the attitude of mind of the patient, for the cure is as much in the mind as in the drug.

---

57. cf. Una Maclean, Magical Medicine: A Nigerian Case Study (1971)
58. Gordon Claridge, Drugs and Human Behaviour (1970) chap. 2

In the Anglo-Saxon period many of the remedies prescribed may have had very little physiological effect, especially in more serious cases, and the assistance of the powers of religion in the psychological battle against illness was therefore of great importance. The recitation of psalms over a remedy or the blessing of herbs by a priest was not meaningless mumbo-jumbo, but represented a very potent force for good. Bishop Wulstan writing the words, "May Jesus Christ heal thee, Segild" on a piece of parchment and sending them to a sick woman who had requested help,[59] was performing as valid, and effective a medical function as the modern doctor who prescribes a placebo to an anxious patient. Today medicine prefers to put its faith in the drugs themselves, rather than in religion, but this is not to question the effectiveness of the earlier healing role of the Church. Physical as well as spiritual healing was very much a function of the Church throughout the Anglo-Saxon period and for some time after it. Indeed one might well argue that having disposed of the man of God modern medicine has found it necessary to create the psychiatrist to fulfil the same supporting role.

The religious element in medicine seems to have answered the psychological needs of the sick members of the community. Illness was seen as a complete bodily disintegration, and no distinction was made between mental and bodily disease. When a man was sick:

> "the whole individual is sick, and the whole individual is treated. This particular form of integration offers undoubtedly certain therapeutic advantages, as disease is fundamentally a process of disintegration on all levels, the physical, mental and social. Magic or religion seems to satisfy better than any other device a

---

59. Life of Wulstan II, 13

> certain eternal psychic or "metaphysical" need of mankind, sick or healthy, for integration and harmony. The non-empirical character of primitive medicine provides it also with an element of certainty which gives it undoubtedly considerable curative powers." 60

It was this certainty which the theories of disease sought to provide. In this sense primitive medicine was not "irrational", but rather super-rational, since it was concerned always to find a cause for everything, and had no concept of chance or accident. A man who was ill was not immediately concerned with which disease it was, but wanted to know why he was ill, and why it was he who was picked out rather than another. The doctrine of the four humours was admirably designed to answer these questions, - the disease was caused because it was an inauspicious season of the year, or because one humour had become too dominant in the body, or because the man had not been observing the regimen suited to his temperament ... and so on. Or there were other more personal causes: malign spirits or other devilish tricks; a God who had been sinned against; a hostile human being using supernatural means against an enemy.

These reasons for sickness are found quoted in Anglo-Saxon literature. When Alfred became ill after his wedding Asser tells us that there was considerable speculation as to its cause. Many people thought it was due to the favor et fascinatio of the surrounding people, some thought it was caused by the envy of the devil, while others thought it was an unusual kind of fever, or the ficus he had suffered from since a child.[61] The words favor et fascinatio seem to imply the evil eye, since fascinatio is used to gloss malscrunga a word in the third

---

60. E.H. Ackernecht, Medicine and Ethnology (Baltimore, 1971) p. 25
61. Asser, Life of Alfred ch. 74

Leechbook[62] used for bewitchment or enchantment. A list of the virtues of mugwort advises a man to keep it within his house, since "it forbiddeth evil leechcrafts and also turneth away the evil eyes of evil men",[63] and there are other remedies against the evil eye in the medical texts.[64]

Christianity fits easily into this pattern of disease causation, since Christ's healing miracles are regularly followed by the injunction, "sin no more", and Bede is always very careful to give a reason for each person's illness among his many descriptions of such incidents. For instance, he tells us that Eadbald was afflicted with madness as a punishment from God for his apostasy and immorality.[65] Torhtgyth, a nun, "in order that her strength, like the apostle's, might be made perfect in weakness, ... was suddenly afflicted with a most serious bodily disease and for nine years was sorely tried, under the good Providence of our Redeemer, so that any traces of sin remaining among her virtues through ignorance or carelessness might be burnt away by the fires of prolonged suffering".[66]

Aethelthyth, Abbess of Ely, had a painful tumour on her neck, and felt it was a punishment for her earlier vanity:

> "I know well enough that I deserve to bear the weight of this affliction in my neck, for I remember that when I was a young girl I used to wear an unnecessary weight of necklaces; I believe that God in His goodness would have me endure this pain in my neck in order that I may thus be absolved from the guilt of my needless vanity." 67

Disease is thus seen mainly as a punishment for some sin,

---

62. Lbk. III, i
63. ps.A. xi, 1
64. e.g. ps.A. lxxiii, 2; lxxvi, 4; Lbk. I, lxiv
65. H.E. ii, 5
66. H.E. iv, 9
67. H.E. iv, 19

witting or unwitting, or as a trial of one's constancy, and in this sense it plays a valuable social role as a sanction against asocial behaviour. The main defence against disease when seen in this way is to do good and offend no-one. The healing of disease, involves more than merely physical healing, for the patient demands reassurance that his sins have been forgiven, or that the evil spirit who attacked him has been defeated and cannot attack again. There is an element of guilt and forgiveness about illness that does not now exist, and in performing this function of healing there is little difference between the doctor and the priest.

> "The medicine man is a soul doctor and his fellow primitive whom we know as an emotionalist needs him badly. He gives peace by confessing his patient. His rigid system which ignores doubt, dispels fear, restores confidence, and inspires hope. And as Charcot says: the best inspirer of hope is the best physician ... In a certain sense the primitive psychotherapist uses more and stronger weapons than the modern psychotherapist. He works not only with the strength of his own personality. His rite is part of the common faith of the whole community ... The whole weight of the tribe's religion, myths, history and community spirit enters into the treatment. Inside and outside the patient he can mobilise strong psychic energies no longer available in modern society." 68

It is in this spiritual aspect of primitive medicine (and Anglo-Saxon medicine) that much of its strength lies, and it is therefore inadequate to consider only the aspects which would now be called "medical", when studying Anglo-Saxon medicine, for it covered a much broader field. It will be noticed that the doctrine of the humours ascribes causes to disease which are largely impersonal, and do not involve the same feelings of guilt and sin, an offended God, and malignant

---

68. Ackernecht, op. cit., p. 130

devils. This could perhaps be called a development, but the doctrine coexisted alongside these earlier ideas, and failed to supplant them long after the Anglo-Saxon period.

The medicine of any period can only be studied within the background and limitations of its age. Though much of Anglo-Saxon medicine may seem unscientific and irrelevant to modern eyes, it should not be criticised for this until one has considered how far it fulfilled the needs of the population it served. As future chapters will show[69] the Anglo-Saxons themselves seem to have had few doubts about the effectiveness of the medicine available to them.

---

69. See particularly chapter 5

CHAPTER 4: THE ANGLO-SAXON PHARMACOPEIA

The Anglo-Saxon pharmacopeia consists mainly of herbs, with the addition of a number of ingredients taken from animals. One text, the Medicina de Quadrupedibus, deals solely with animal remedies, but overall they probably make up only 10% of the total, and are not of great importance in medicine.

Before being able to assess the usefulness of the herbs prescribed by the Anglo-Saxons it is necessary to identify them. This immediately raises problems. Texts such as the Herbal of pseudo-Apuleius, which are arranged by herb, rather than by remedy, normally give a Latin name, and sometimes a Greek one, followed by an English synonym. Each herb is illustrated and a description of the habitat in which it is found is often included. There are thus a number of different pointers towards its identity which can be followed. In the Leechbooks, on the other hand, the herbs appear in remedies without any introduction, and there is usually little help to identify them beyond the semantics of the name itself.

Moreover, there are two levels of identification to be considered; one made by the Anglo-Saxons in translating the Latin names of herbs into Old English and the other made by more modern commentators. The two do not always agree. For instance, in the continuation to the Ps.Apuleius text taken from Dioscorides the Saxon translator has in some cases recorded the Latin or Greek name of the herb and left a blank for the English name, presumably because he did not know it. An example is "Deos wyrt ðe man scordias and oðrum naman .... nemneþ ...".[1] Cockayne however, identifies skordion with water germander,

---

1. ps.A. clxiii

Teucrium scordion, by tracing it back to the text of Dioscorides,[2] which of course was unknown to the Saxons.

Elsewhere the Saxon translator appears to have made errors of identification, as with the equation of bryonia with hymele.[3] Hymele in other contexts is usually associated with Humulus lupulus, the hop plant,[4] and not with bryony, which is poisonous, and in this case the identification seems to be a simple mistake. In other instances the linking of a classical herb with an English equivalent may be based on very dubious grounds, but the identification can be accepted because of the persistence of the tradition. Such an example is the equation of Dioscorides' herb prasion with the English horehound, Marrubium vulgare.[5] In one sense it does not matter whether horehound was the herb Dioscorides originally intended in describing prasion, - if herbal medicine has always used the two as if they were interchangeable then they must be accepted on a de facto basis as being one and the same herb.

For the purposes of this discussion the Anglo-Saxons' identification of the herbs appearing in the classical texts will generally be accepted, and herbs with no English name are regarded as being unidentified, and therefore not included in general use.

The problems of identification do not just occur in equating classical names of plants with Old English names, but more importantly, in equating Old English names with modern botanical ones. Earle in his work on English plant names, gives a useful summary of the methods of identifying plant names,[6] which

---

2. Cockayne, op. cit., Vol. I, p. 291
3. ps.A. lxviii, p. 173
4. e.g. Grattan + Singer, p. 84, 111
5. ps.A. xlvi, p. 23. Botanical names here and elsewhere in this chapter follow the usage of A.R. Clapham et al., Flora of the British Isles 2nd ed. (Cambridge, 1962)

is worth repeating, at least in part. Among his criteria are:

(1) Constancy of association between English and Latin name

e.g. Artemisia - mugwort; absinthium - wormwood; Fraga - strawberry; Hedera - ivy; nasturtium - cress; Plantago - waybroad; marrubium - horehound.

These associations are confirmed in the use of the word vulgaris or officinalis in the modern botanical name. The first indicates that this was the commonly accepted name for the plant at the time of the introduction of the Linnaean system, as Artemisia vulgaris, Marrubium vulgare etc; and the second indicates that this was the medical name of the plant and was so sold in the apothecaries' shops. Examples are Nasturtium officinale (now Rorippa nasturtium aquaticum R.Br.), Betonica officinalis.

(2) Continuity of English Names

In this case the Old English name has continued in modern English, e.g.

Alba spina	haegþorn	hawthorn
Betulus	byrc	birch
Fraga	streowberige	strawberry
Hedera	yfig	ivy
Quercus	ac	oak
Urtica	netele	nettle

To these might be added Old English names which have survived as dialect names for plants e.g. woodwax (O.E. wuduwax) for Dyer's Greenweed;[7] maythe (O.E. maegþe) for stinking mayweed;[8] knee-holly (cneoholen) for Butchers

---

6. J. Earle, English Plant Names from the Tenth to the Fifteenth Century (1880) p. lxvii-lxxiii
7. Grigson, p. 135
8. Ibid., p. 401

broom;[9] hayriff (hegerife) for goosegrass[10] etc.

(3) Consistent glossing of synonyms

e.g. In one list sempervivum, sinfulle appears, and in another Aizon, sinfulle. Aizon is the Greek for sempervivum. The fact that the same plant was recognised under diverse names suggests that the glossing was reliable and adds confirmation to the identity of the plant as Sempervivum tectorum.

(4) Testimony of Modern Languages

For example when O.H. German agrees with the Old English for a given Latin name: millefolium = S.gearwe, O.H.G. garawa. To this may be added English names derived directly from the Latin e.g. Betonica, betony; mentha, mint; rosa, rose.

(5) Descriptiveness in the names

e.g. a gloss Trifolium, geacessur suggests a plant with a trefoil leaf, a sour taste, and flowering in the season of the cuckoo, - possibly Oxalis acetosella, wood sorrell. Evidence of this sort is rather weak and should not be pushed too far.

Considering these criteria, together with Cockayne's efforts at identifying all the plant names used in the Anglo-Saxon period, an assessment has been made of the reliability of their identifications. The major Saxon medical texts include a total of 327 herbs and spices. Of these, 62 herbs were regarded as being positively identified; 59 were probably reliably identified; 54 were possible; 40 had dubious identification and 112 were unidentified.[11] These figures show the extent of

---

9. Ibid., p. 433
10. Ibid., p. 368
11. See appendix A

the problem of identification. For nearly half the total number of herbs (152) only a most tentative guess at their identity can be made, and for little more than a third (122) can the identifications be considered as at all reliable. However, even this marks a major advance on, Singer, who suggested that only twenty-seven plants could be safely identified.[12]

The total number of herbs used in the medical texts, 327, is smaller than previous estimates have suggested. Payne, for instance, has estimated that there were about 500 English names of plants in use in the Anglo-Saxon period, excluding purely Latin names or translations.[13] Some of these must be synonyms, for a number of plants seem to have an extensive list of names. The plant usually identified as elecampane, Inula helenium is known as elene, ellen, elenan, eolonan, horseolene, sperewyrt, and inula campana in the texts; and eordgealla, felterrae, curmelle, centauria maior and hyrdwyrt are all synonyms for yellowwort, Blackstonia perfoliata. To add to the confusion, some of these names are used for the common centaury Centaurium erythraea, as well, which is centauria minor or curmelle seo laesse. Too often, however, the names are used without the major or minor appellations and it is impossible to know which herb is meant.

Other names of plants appear only in glossaries, such as the list in the Durham M.S. Hunter 100a, and are not in the corpus of herbs for practical use. Even so, Payne's estimate of the number of plants identified by the Anglo-Saxons seems over-generous, and the true figure must be nearer the 300 or so herbs used in the medical texts.

Some of the plants which appear in the herbals occur in

---

12. Grattan + Singer, p. 87-88
13. J.F. Payne, English Medicine in Anglo-Saxon times (Oxford, 1904) p. 81

only one remedy, and 136 herbs are used between one and three times. To give these figures some sort of perspective, the complete group of 327 herbs are used well over three thousand times altogether; the group of 136 herbs are used perhaps 270 times. If these herbs are ignored it leaves a total of 191 herbs in what may be called regular use, and of these a group of twenty-five herbs make up almost half the total usage, and a group of fifty-five make up two-thirds. This suggests that the Anglo-Saxons exercised some measure of selection and did not use every herb known to them, more or less at random. The basis of their medicine thus consisted of a nucleus of herbs of proven effectiveness, surrounded by a penumbra of herbs of lesser value or more limited effectiveness. This outer group includes herbs whose use is restricted to a small number of ailments, such as woodwax (Genista tinctoria), which is used on only eight occasions, but on six of them the remedies are for theor,[14] or cassoc, hassock grass (Deschampsia cespitosa), which is used mainly for devil sickness or other mental disturbances.[15] It also includes feldmore (Pastinaca sativa) which is used 14 times for 13 different ailments, comfrey (Symphytum officinale), used 12 times for 12 different ailments, and woad (Isatis tinctoria), used 8 times for 8 different ailments.[16] The reason for this apparently indiscriminate use of certain herbs may be that to the Anglo-Saxons remedies with several herbs looked more impressive than remedies with only one, so that some herbs were used as "fillers" because they were known not to be harmful rather

---

14. Lbk. I, xlvii 2; Lbk. III xxxl, 1b; Lacn. lxxiv, lxxv, lxxvii
15. Lbk. I, lxiii, 1b; Lbk III, lxii, 1d, lxiii, lxiv, lxiv 1b, lxvii 1b; Lacn. xxix
16. See appendix A

Table 4.1 showing the herbs used most frequently in remedies, in order of popularity

	English Name	O.E. Name	Botanical Name	IDENT.	NO. TIMES USED	PS. A.	LBK. I	LBK. II	LBK. III	LACN.
1	Betony	Betonice	Betonica officinalis L.		128	1	1	7^3	1^4	2^2
2	Rue	Rude	Ruta graveolens L.		96	5	9^2	3	1^4	4
3	Pepper	Piper	Piper nigrum L.		92	-	3	1	-	6^2
4	Wormwood	Wermod	Artemisia absinthium L.		87	-	7^2	2	1^4	6^2
(5	Plantain	Wegbraede	Plantago major L.		76	2	4	18	12^8	24^4
(5	Elecampane	Eolone/elene etc.	Inula helenium L.	+	76	-	5	7^3	5^2	2^2
7	Bishopwort	Bisceopwyrt	Mentha aquatica L.	+	71	x	2	10^3	5^2	8^2
8	Horehound	Harhune	Marrubium vulgare L.		69	8^3	7^2	13^5	8	10^2
9	Fennel	Finol	Foeniculum vulgare Mill.		66	-	11^2	6	7	5
10	Pennyroyal	Dweorge dwostle	Mentha pulegium L.		59	3	-	10^3	9	8^2
11	Yarrow	Gearwe	Achillea millefolium L.		54	4	11^2	-	10^2	22^2
12	Lupin	Elehtre	Lupinus nootkatensis Donn ex Sims		51	-	9^2	26^6	1^4	13^4
13	Wild celery	Merce	Apium graveolens L.	*	50	-	18^4	5	23^{10}	13^4
14	Radish	Raedic	Raphanus sativus L.	+	46	x	18^4	19^5	20^3	1
15	Dill	Dile	Anethum graveolens L.	*	43	-	-	4	23^{10}	28^8
(16	Yellowwort	Eorðgealla	Blackstonia perfoliata (L) Huds.	*	41	-	29^8	13^5	10^2	12
(16	Corn cockle	Gitrife	Agrostemma githago L.		41	x	6	-	12^8	24^4
18	Ground Ivy	Eorðyfig, hofe	Glechoma hederacea L.		39	16^{10}	14^2	19^5	-	-
19	Greater Celandine	Celeþenie	Chelidonium majus L.		38	26^7	14^2	x	12^8	22^2
20	Agrimony	Garclife	Agrimonia eupatoria L.		37	11^5	-	26^6	12^8	17^5
21	Cumin	Cymen	Cuminum cyminum L.	*	35	26^7	-	10^3	-	-
22	Mugwort	Mucgwyrt	Artemisia vulgaris L.		33	6^2	-	-	-	-
(23	Attorlothe	Attorlaþe	Echinochloa crus-galli (L.) Beauv.	-	31	-	13	26^6	-	-
(23	Feverfew	Feferfuge	Centaurium erythraea Rafn.	*	31	11^5	-	-	-	10^2
(23	Red nettle	Reade Netele	Lamium purpureum L.	*	31	-	17	24^2	-	-

N.B. In the identification column all unmarked names are considered as being reliably identified; * = a probable identification; + = possible identification; - = dubious identification. In the remaining columns the numerals indicate the relative importance of the herb in the individual texts, up to 30th position. An x indicates that a herb does not appear in that particular text.

than for any positive effect they might have. Another reason, (and probably a more valid one) is that herbal medicine was still a developing tradition, and the Saxons must have been experimenting with many herbs, using them in different combinations and for different ailments, until greater experience reduced the number of uses to those for which they proved most effective. This is especially true for herbs such as comfrey, and to a lesser extent woad, which by the time of sixteenth century herbalists such as Gerard were used for certain specific conditions, - comfrey for bruises, wounds and broken bones,[17] and woad for ulcers, inflammation and bleeding.[18]

The most popular herbs are listed in the following table, together with their order of importance in the individual texts. As is immediately obvious, there are wide variations in the amount of use made of the herbs, even in such a relatively small group as this, and betony, the most popular herb, is used more than four times as often as the herbs at the bottom of the list. The commonest herbs are also the ones whose identities are least in question, which makes it possible to consider their physiological action in the light of modern research, together with the persistence of their use into medieval and post-medieval herbal medicine.

It is worth considering some of these herbs in detail in order to show how they are used, and the range of ailments which they cover.

(1) Betony, Betonica officinalis L.
O.E. names: Betonice, bisceopwyrt

Commonest ailments for which prescribed:

(1) Sore of side (pleurisy?)
(2) Devilsickness and other mental disorders

---

17. Grigson, p. 302
18. Grieve, p. 852

Plate 10. Betony, Betonica officinalis L.

(2) Ailments of the head
(2) Lung disease
(2) Fever
(2) Nausea

Bisceopwyrt is given as a synonym for betony in the pseudo-Apuleius text,[19] but in the other texts betony and bishopwort sometimes occur together in the same remedy,[20] and it seems possible that two different herbs are meant. They are thus treated independently in this survey, and the problems of identifying bishopwort will be discussed more fully later.

Betony was a herb of high repute throughout the middle ages, and appears in first place in the Herbal of pseudo-Apuleius. This list of remedies was originally a separate treatise de herba vettonica ascribed to Antonius Musa, physician to the emperor Augustus. It listed 47 uses for the herb, though in the Anglo-Saxon version these were reduced to twenty-nine.

On the Continent betony was equally popular, and Walafrid Strabo in his ninth century poem de cultura hortorum, sings its praises:

> "Whatever your fancy, the wonderful powers
> which this herb has will supply all your needs."[21]

He says also that some men drink it daily as a panacea against all ills.[22]

In view of this reputation it is interesting that betony is the first choice herb for only one ailment, that of "sore of side". Even for afflictions of the head, with which it is traditionally associated, rue is used more frequently, though

---

19. ps.A. I, i
20. e.g. Lbk. I, xxiii 2, xxxix 3, xlvii, lxii,1, lxvi; Lbk. II 1v, 2; Lbk. III xli, lxiv,1, lxvi; Lacn. L, lxxii etc.
21. "... huius virtus mirabilis herbae omnia sufficiet." Raef Payne, trans. Walafrid Strabo: Hortulus (1966) p. 56-7
22. Ibid.

Pittsburgh

betony is prescribed particularly for broken heads:

> "For broken head, take betony, bruise it and lay it on the head above, then it unites the wound and healeth it." 23

In fact betony's popularity is built on its use in a wide variety of complaints, rather than on any specific virtues it has. It is a jack-of-all-trades, to be prescribed for almost anything and everything, and because of this its use has gradually declined over the centuries. Though Culpepper, in the seventeenth century, described it as "a very precious Herb",[24] some modern herbals do not prescribe it at all,[25] and another mentions that it is only used in combination with other herbs.[26] According to Grigson, "Betony is a fraud, with no outstanding virtue of any kind."[27]

(2) Rue, Ruta graveolens L.
O.E. name: rude

Commonest ailments for which prescribed:

(1) Head
(1) Wamb
(2) Eyes
(2) Liver
(2) Maw
(2) Milt

Rue was originally a native of Southern Europe, but was probably introduced to Britain by the Romans and is now naturalised in Lancashire and Yorkshire.[28] As can be seen from the list of ailments, it is most frequently used for internal disorders, - the wamb and the maw being parts of the stomach, and the milt being the spleen. It is also regularly prescribed for headaches.

---

23. Lbk. I, i, 14
24. Culpepper, The English Physitian Enlarged, (1669) quoted Grigson, p. 348
25. e.g. B.C. Harris, The Compleat Herbal (New York, 1972), H. Flück, Medicinal Plants (1976)
26. Grieve, p. 97-9
27. Grigson, p. 348
28. Grieve, p. 695

Plate 11. Rue, Ruta graveolens L.

"For head wark, take rue and wormwood,
pound them and mingle with vinegar and oil,
strain through a cloth, smear the head
with it; or work a paste of the same,
lay it on the head and swathe it up well,
when thou will to bed." 29

Modern herbals[30] describe it as being useful in hysterical affections, coughs, croupy affections, colic and flatulence, nervous nightmares and headaches. It is a local irritant and is used as an appetiser, diuretic and antispasmodic. It is also prescribed for high blood pressure because it strengthens blood capillaries. These uses include most of those given in the Anglo-Saxon texts, and the active principles of rue have been established by modern medical research. Among the medically active constituents are a volatile oil, a little tannin, alkaloids, derivatives of coumarin, and the flavonoid glycoside rutoside. Large doses of the volatile oil are toxic, producing vertigo and frenzy.[31]

(3) Pepper, Piper nigrum L.
O.E. name: piper

Commonest ailments:

(1) Nausea
(1) Toothache
(1) Milt
(2) Eyes
(2) Maw
(2) Worms

Pepper has been important as a spice and condiment for at least as long as it has been used as a drug, and the history of its importation into England is a long one. Pepper was included among the few gifts that Bede distributed on his death bed,[32] and it was also frequently sent as a present to

---

29. Lbk. I i, 2
30. Grieve, p. 696; Flück op. cit., p. 87
31. Flück op. cit., p. 87
32. Cuthbert's letter on the death of Bede, p. 579-87 in B. Colgrave + R.A.B. Mynors eds. Bede's Ecclesiastical History of the English People (Oxford, 1969)

friends and advisers in England by the Anglo-Saxon missionaries in Germany.[33]

In modern medicine pepper is used for constipation and the urinary organs. It aids digestion and corrects flatulence and nausea, and is also used in vertigo and for paralytic and arthritic disorders.[34]

Pepper is the most frequently used herb in Leechbook II, because of its aromatic, stimulant and carminative properties, and its beneficial effects on the stomach. Its use in that text is similar to modern usage but its occurrence in remedies for sore eyes and for toothache is not so easy to understand, and has not survived into modern practice. Pepper is an irritant and its application to an inflamed eye would have only inflamed it still further. However, in most cases the pepper was considerably diluted and applied in small quantities, and it may have been used according to the homeopathic principle of 'like cures like', so that what in large doses will inflame the eye, in very small doses will cure such an irritation.

> "Thus shall a man work an eyesalve; take the nether part of strawberry plants and pepper, pound them well, put them on a cloth, bind them fast, lay them in sweetened wine, make somebody drop one drop into the eyes." 35

(4) Wormwood, Artemisia absinthium L.
O.E. name: wermod

Commonest ailments:
(1) Theor
(1) Maw
(1) Liver
(1) Worms
(1) Ears
(2) Nausea

---

33. E. Emerton, Letters of St. Boniface (Columbia, 1940), letters xxix, lxviii etc.
34. Grieve, p. 627
35. Lbk. I, ii, 21

Plate 12. Wormwood, Artemisia absinthium L.

Wormwood is another of the plants mentioned in Walafrid Strabo's poem, though the uses he gives are rather different from those prescribed by the Saxons:

> "Its powers are famous,
> Its effectiveness proven. It tames a raging thirst, fever
> It banishes. If, besides, yourhead should suddenly start to
> Throb and throb with pain, if fits of fainting worry you,
> Seek its help." 36

Later herbalists have tended to follow the English traditions. According to Pechey:

> "It strengthens the Stomach and Liver, excites Appetite, opens Obstructions, and cures Diseases that are occasioned by them; as the Jaundice, Dropsie, and the like. 'Tis good in long, putrid Fevers, it carries off the vitious Humours by Urine, it expels Worms from the Bowels, and preserves Clothes from Moths ..." 37

The strange disease of theor, for which wormwood is often prescribed is translated by Cockayne as "dry disease". According to Grattan and Singer "Theor seems usually connected with the chest and is then perhaps roughly 'bronchial trouble'."[38] However, Bosworth and Toller suggest 'inflamed swellings' as a meaning, and in many cases theor is included in remedies for wens.[39] One remedy is for theor in the foot,[40] and another is for a 'theor wen':

> "... if it be on a man's knee, or on another limb, work a paste of sour rye groats or dough, add the white of an egg and brook cresses, lay on the limb till the paste gets hot, remove it then and lay another on." 41

This is difficult to associate with 'bronchial trouble', and Bosworth and Toller's interpretation seems more convincing.

---

36. Strabo, op.cit., ix
37. John Pechey, The Compleat Herbal of Physical Plants (1694), quoted Grigson, p. 413
38. Grattan + Singer, p. 119 n.2.
39. e.g. Lacn. xlix, lxxv; Lbk. III, xxx
40. Lbk. I, xlvii, 2
41. Lbk. III, lix

The chief constituent of wormwood is a volatile oil, which in large doses is poisonous, producing vertigo, cramps, intoxication and delirium as well as excessive blood flow to the abdominal organs.[42] Wormwood also contains a bitter glucoside absinthin (absinthic acid), and tannin, resin, starch, nitrate of potash and other salts.[43] Several liqueurs, particularly absinthe and vermouth, include wormwood, because of its reputation as a mental restorative.[44] The name 'vermouth' is in fact a corruption of the German name for wormwood, wermuth, meaning 'preserver of the mind'. The modern English name however, has lost this association, and merely recalls the plant's ability to expel worms.

(5) Great plantain, Plantago major L.
O.E.: Wegbraede - Waybroad

Commonest ailments:

(1) Wens
(1) Fever
(2) Wamb
(3) Wounds

Waybroad is one of the herbs included in the pagan Lay of the Nine Herbs, which occurs in the Lacnunga text. The poem mentions each herb in turn together with its magical powers, and is followed by a set of directions for using them.[45] The nine herbs are mugwort, waybroad, stune (?lambscress), stithe (?nettle), attorlothe, maythe, wergule (crabapple), chervil and fennel. It can be seen that this list does not bear much relation to the actual usage of herbs in Anglo-Saxon medicine, - only waybroad and fennel appear in the top

---

42. Flück, op.cit., p. 162
43. Grieve, p. 859
44. Ibid.
45. Lacn. lxxix, lxxxii

Plate 13. Great plantain, Plantago major L.

ten herbs, together with mugwort and attorlothe in the top twenty-five. The charm is evidently based on a different herbal tradition, but its origins are obscure and difficult to elucidate.

The lines relating to waybroad are as follows:

"And you, Waybread, mother of worts,
Open from eastward, powerful within,
Over you chariots rolled, over you queens rolled,
Over you brides cried, over you bulls belled;
All these you withstood, and these you confounded,
So withstand now the venom that flies through the air,
And the loathed thing which through the land roves." 46

Since the plant stands up to being walked on and ridden over it will presumably stand up to the forces of disease equally sturdily. "Mother of Herbs" is an appellation usually given to mugwort, but on this occasion usurped by waybroad, more logically perhaps, in view of their relative importance in Anglo-Saxon medicine.

Today waybroad is used mainly externally, for inflammation of the skin, malignant ulcers, intermittent fevers, and for wounds. "Rubbed on parts of the body stung by insects, nettles etc., or as an application to burns and scalds, the leaves will afford relief, and will stay the bleeding of minor wounds."[47]

Yarrow is the wound herb par excellence, but waybroad is also a popular choice, as in the following example:

"A wound salve; take seed of waybroad,
bray it small, shed it on the wound, soon
it will be better." 48

According to Flück, "The active constituents are still little known; mucilage and the glycoside aucubin are present".[49]

---

46. Grigson's translation, p. 356
47. Grieve, p. 641
48. Lbk. I,xxxviii,2; also ps.A. ii,6
49. Flück, op.cit., p. 146

Plate 14. Elecampane, Inula helenium L.

(6) Elecampane, Inula helenium L.
O.E. names: elenan, elene, ellen, eolonan, horseolene, spereWyrt

Commonest ailments:

(1) Blotch, scab
(1) Elephantiasis, dropsy
(1) Wens
(2) Theor

The identity of this plant is rather in dispute. Grattan and Singer have argued that it is impossible to identify, chiefly on the basis of the manuscript illustrations[50] (rather dubious grounds for identification, whether to prove or disprove a case), whereas Grigson has said, "There seems no doubt that our Elecampane is the helenion or inula campana of Dioscorides, and it was probably the plant which the Anglo-Saxons called elenan, elene, ellen, eolonan or horseolene".[51] The consistent usage of the herb might be of some help in deciding the identification, but unfortunately the evidence in this case is less unequivocal than with some of the herbs previously mentioned. In the Saxon texts elecampane is used mainly for skin infections of one sort or another, and as the name horseolene suggests, it is also used in veterinary medicine.[52]

Culpepper ascribes many virtues to elecampane, and among them is its efficacy in skin complaints.

> "The root boiled well in vinegar, beaten afterwards and made into an ointment with hog's suet or oil of trotters is a most excellent remedy for scabs or itch in young or old; the places also bathed and washed with the decoction doth the same; it heals putrid sores or cankers ... The distilled water of the leaves and roots together is very good to cleanse the skin of the face or other parts from any morphew, spots or blemishes, and make it clear." 53

---

50. Grattan + Singer, p. 90-91
51. Grigson, p. 394
52. e.g. Lacn. cxliv
53. Culpepper, op.cit., quoted Grieve, p. 281

Today elecampane is not much used, and when it is, it is mainly for coughs, consumption and other pulmonary complaints.[54] In the Anglo-Saxon texts elecampane is prescribed in remedies for 'lung disease', but it is not a first choice herb, and is usually found in association with several others.[55] Nevertheless, the use made of the Anglo-Saxon herb seems sufficiently close to the use made of elecampane to suggest, as Grigson has done, that they are probably the same herb, even if the identification cannot be entirely certain.

(7) Bishopwort, Mentha aquatica? Aegopodium podagraria?
O.E. name: Bisceopwyrt

Commonest ailments:

(2) Devilsickness and mental disorders
(2) Theor

In the ps.Apuleius text bisceopwyrt is given as a synonym for betony, and this identification is also given in most of the glossaries. However, as mentioned before, there are a number of occasions (at least a dozen) where betony and bishopwort occur in the same remedy, and this suggests that bishopwort may be a different herb. This is borne out by Aelfric's vacabulary which glosses betonica, seo laessa biscopwyrt,[56] and implies another bishopwort was known.

Cockayne suggests various alternatives: Ammi maius, a foreign herb, on the basis of the appellation "southern" bishopwort in Leechbook II; and Verbena officinalis and Hibiscus, ?tree mallow, on the basis of glossaries.[57] Grigson gives bishopweed or bishopwort as local names for goutweed,

---

54. Grieve, p. 280
55. e.g. Lbk. II, 1i; Lbk. III xiv, 2; Lacn. 1i, 1iii
56. cf. Earle, op.cit., p. 15
57. See Glossary, Cockayne, op.cit., Vol. II, p. 372

Aegopodium podagraria,[58] and water mint, Mentha aquatica.[59]

Grieve also suggests goutweed and quotes a remedy from the Lacnunga as an example of its use in medicine for pigs:[60]

> "For sudden death in swine: Put this always into their food. Seethe clite; give to eat. Take also lupin, bishopwort, and hassock, thevethorn, hedgerife, haranspicel; sing four masses over them; drive them into the sty; hang the plants on the four sides and on the door; burn the plants; add incense to them; make the smoke steam over the swine." [61]

She gives goutweed's other qualities as diuretic and sedative, and says it is used internally for aches in the joints, gout and sciatic pains, and externally as a fomentation for inflamed parts. In the Leechbooks, however, the herb gotwoðe has been identified with Aegopodium podagraria,[62] rather more convincingly, and Grigson has suggested that bishopweed is a late name.[63] The identification of the Anglo-Saxon biscopwyrt with Aegopodium podagraria thus seems unlikely.

Bishopweed and bishopwort are recorded as local names for Mentha Aquatica in both Hampshire and Wiltshire. This plant's medical qualities are emetic, stimulant, and astringent, and it is good for diarrhoea, colds and influenza and for all inflammatory complaints, whether internal or external.[64] Such uses are perhaps a little closer to the Saxon bishopwort than goutweed, since remedies for devilsickness are usually emetics and purgatives, and theor, as has been mentioned earlier, is probably an inflamed swelling.

Overall the general tenor of the evidence suggests that when

---

58. Grigson, p. 233
59. Ibid., p. 341
60. Grieve, p. 368-9
61. Lacn. cxlv
62. e.g. Lbk. I, xxi, 7; xxxviii 3,5,9; Lbk. II, lii, 1; liii, 1
63. Grigson, p. 233
64. Grieve, p. 544

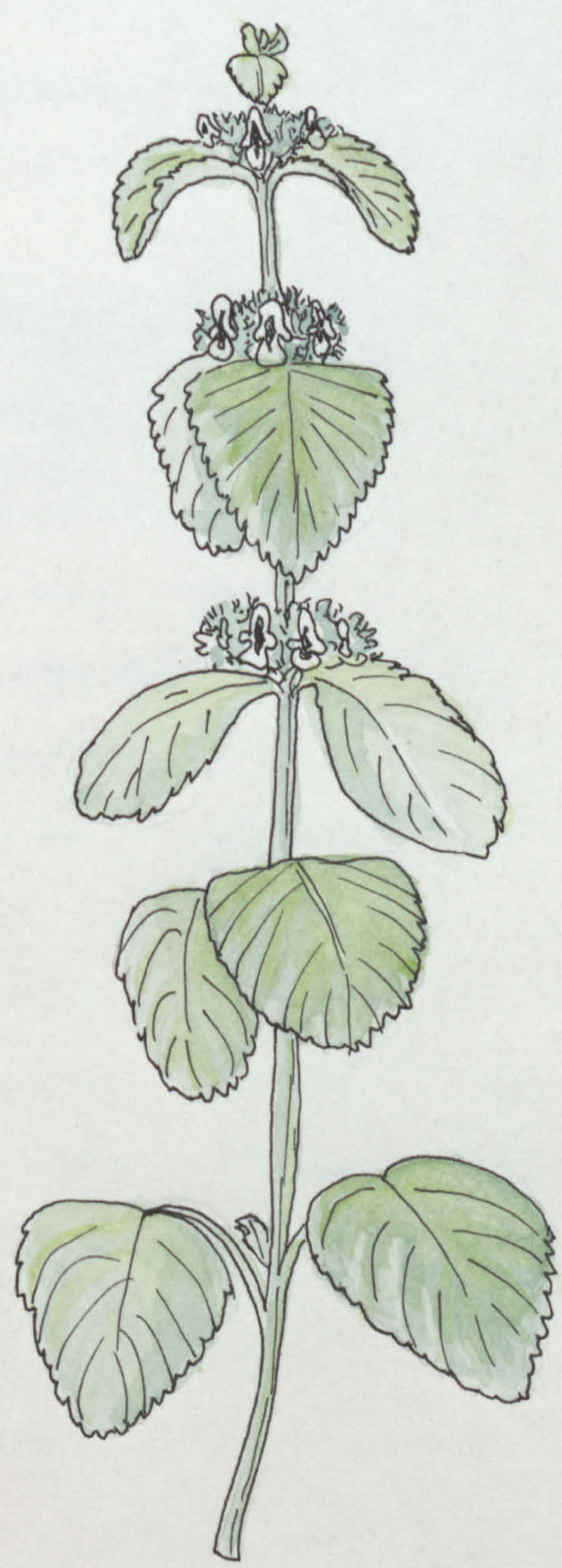


Plate 15. Horehound, Marrubium vulgare L.

biscopwyrt is used in texts it is usually as a synonym for betony, but in a minority of cases another herb is meant. What this other herb might be is difficult to say, but if one was forced to come to a decision Mentha aquatica seems the the most likely, or rather, the least unlikely candidate.

This example well illustrates the problem of identifying the Anglo-Saxon names of plants and shows the impossibility of coming to any firm conclusion in the majority of cases.

(8) Horehound, Marrubium vulgare L.
O.E. names: Harehune, hune

Commonest ailments:

(1) Lung disease
(1) Catarrh, pain in the chest
(1) Cough
(2) Blotch, scab etc.

There is little doubt about the identity of horehound, nor about the consistency of its use through the centuries It was prescribed by Dioscorides for chest complaints, and so used by the Romans. A fragment of an amphora of wine flavoured with horehound was found at the legionary site of Carpow, where it had been used as cough medicine,[65] and the same remedy was prescribed by the Anglo-Saxons.

> "A draught for lung disease. Boil marrubium in wine or in ale; sweeten somewhat with honey. Give it warm to drink after the night's fast ..." 66

Walafrid Strabo includes horehound in his poem and mentions that:

> "taken in a draught,
> For all its nastiness, it assuages pain
> In the chest ..." 67

In the sixteenth century Gerard also sings its praises:

---

65. R.W. Davies, op. cit., p. 92
66. Lacn. lv also ps.A. xlvi, 7
67. Strabo, op. cit., x

Table 4.2 showing the relative popularity of the herbs used in the individual texts

ps. Apuleius	Leechbook I	Leechbook II	Leechbook III	Lacnunga
1 Betony	1 Betony	1 Pepper	1 Betony	1 Betony
2 Plantain	2 Pepper	2 Wormwood	2 Lupin	2 Radish
3 Pennyroyal	3 Plantain	3 Rue	2 Rue	3 Elecampane
4 Yarrow	4 Elecampane	4 Dill	2 Wormwood	4 Rue
5 Rue	5 Cockle	5 Marche	5 Elecampane	5 Fennel
6 Mugwort	6 Wormwood	5 Betony	6 Fennel	6 Pepper
6 Vervain	6 Horehound	7 Fennel	7 Horehound	6 Wormwood
8 Cinquefoil	8 Lupin	8 Aloes	8 Pennyroyal	8 Pennyroyal
8 Horehound	8 Rue	8 Elecampane	9 Earthgall	9 Feverfew
8 Rose	10 Fennel	10 Cumin	9 Yarrow	9 Horehound
11 Aristolochia	10 Yarrow	10 Pennyroyal	11 Eoforthrote	11 Earthgall
11 Conize	12 Attorlothe	12 Earthgall	11 Celandine	12 Groundsel
11 Feverfew	13 Celandine	12 Elder	11 Cockle	12 Lupin
11 Agrimony	13 Ground Ivy	12 Horehound	11 Cropleac	12 Marche
11 Nettle	15 Springwort	12 Bay laurel	11 Agrimony	12 Sage
16 Acanta leuce	16 Red nettle	12 Mint	11 Hindheal	16 Beet
16 Bulbus	17 Marche	17 Plantain	11 Plantain	16 Clate
16 Caerse	17 Radish	18 Costmary	11 Wenwort	16 Hegerife
16 Ground Ivy	17 Houseleek	18 Ground Ivy	19 Elfhorn	16 Agrimony
16 Henbane	17 Groundsel	18 Ontre	19 Brooklime	16 Savine
16 Iris illyrica	21 Eoforthrote	18 Radish	19 Radish	21 Celandine
16 Unfortraedde	21 Dock	18 Rose		21 Yarrow
16 Scordios	21 Oak	23 Red nettle		
16 Southernwood		23 Ricinus		
16 Wulfescamb				
25	23	24	21	22

N.B.

(1) The Peri Didaxeon and the Medicina de Quadrupedibus texts are not included in this table, the first because it contains only 58 herbs and the second because it deals almost entirely with animal remedies.

(2) In this table and subsequent ones, bishopwort is treated as a synonym for betony, and the totals are combined.

(3) The table includes the most popular 20 or so herbs in each text, regardless of whether it is possible to identify them.

> "Syrup made of the greene fresh leaves and sugar is a most singular remedie against the cough and wheesing of the lungs ... and doth wonderfully and above credit ease such as have been long sick of any consumption of the lungs, as hath beene often proved by the learned physitions of our London College." 68

Finally, Syrupus Marrubii is in the British Pharmaceutical Codex (1949) and is made from the leaves and tops of horehound.

The developing specialisation in the use of herbs which is evident among the group just discussed, can also be seen in a more general way by comparing the relative importance of the herbs used in the five major Anglo-Saxon texts. This is done in Table 2.

It is immediately obvious that the pseudo-Apuleius text belongs to a different tradition than the other four, since only ten out of its first twenty-five herbs occur anywhere in the other lists. If one considers the least popular herbs as well the differences are equally striking. The Herbal of ps. Apuleius uses 185 herbs and of these 70 appear only in that text. In Leechbook I 28 herbs out of 189 do not appear anywhere else, and the figures for Leechbook II are 9 out of 122; for Leechbook III 6 out of 136, and for the Lacnunga 5 out of 146. Nearly forty per cent of the herbs in the ps. Apuleius text are thus used exclusively in that text and do not occur elsewhere in Anglo-Saxon medicine. This is a remarkable percentage, and indicates the limited influence of this text on the main corpus of Saxon materia medica. The Leechbooks, and to a lesser extent the Lacnunga, all draw on late Classical texts and a Mediterranean tradition; but the basis of these works, in contradistinction to the ps. Apuleius

---

68. John Gerard ,The Herbal or Generall Historie of Plantes, (1597), quoted Grieve, p. 415-6

Herbal, seems to come from a strong and extensive native tradition of herbs.

It would have been surprising if the situation were found to be otherwise. All societies, however primitive, have medical traditions and practices, and one has only to consider the frequency of trephination in neolithic times,[69] or the relative sophistication of the medical implements found in La Tène graves,[70] to appreciate the antiquity of the traditions to which the Anglo-Saxons were heir. What is lacking is merely the written evidence of these traditions, not the traditions themselves. Even elsewhere in Western Europe, which is both physically and culturally nearer the Mediterranean, the classical pharmacopeia was not completely absorbed into the local traditions. This can be demonstrated by comparing the ps. Apuleius text with other lists of herbs from Continental material, such as Walafrid Strabo's poem, the St. Gall plan,[71] and the Capitulare de Villis, which prescribes the herbs to be planted on Charlemagne's estates.[72] Such a comparison is shown in Table 3.

Again the ps. Apuleius text stands out as being different from the rest, and the other Saxon texts have close affinities with the Continental material. This statement perhaps needs qualification for both the monasteries at St. Gall and at Reichenau (where Walafrid Strabo was abbot) had close links with England and Ireland in the seventh and eighth centuries, and one would expect to find elements in common in their monastic traditions and knowledge of texts.

---

69. For a general survey see F.P. Lisowski, "Prehistoric and early historic trepanation" pp. 651-672 in D. Brothwell and A.T. Sandison eds., Diseases in Antiquity (Springfield, 1967)
70. J.M. De Navarro "A Doctor's Grave of the Middle La Tène Period from Bavaria" Proc. Prehist. Soc. 21 (1955) 231-248
71. See R. Willis "Description of the ancient plan of the monastery of St. Gall in the ninth century" Arch. J. 5 (1848) 85-117

Table 4.3 showing the Herbal of ps. Apuleius compared with other Anglo-Saxon texts and some Continental material

ps. Apuleius	Walafrid Strabo	St. Gall Plan	Capitulare de Villis	Aelfric Bata
Betony	WS			AB
Plantain				AB
Pennyroyal	WS	SG	CV	AB
Yarrow				AB
Rue	WS	SG	CV	AB
Mugwort	WS			AB
Vervain				
Cinquefoil				AB
Horehound	WS			AB
Rose	WS	SG	CV	AB
Aristolochia				
Conize				
Feverfew			CV	AB
Agrimony	WS			AB
Nettle				AB
Acanta leuce				
Bulbus				
Caerse			CV	AB
Ground Ivy				
Henbane				AB
Iris illyrica				
Unfortraedde				
Scordios				
Southernwood	WS		CV	AB
Wulfes camb				
Totals:	8	3	6	15

Other A-S texts	Walafrid Strabo	St. Gall Plan	Capitulare de Villis	Aelfric Bata
Betony	WS			AB
Pepper	WS			
Rue	WS	SG	CdeV	AB
Wormwood	WS			AB
Elecampane				AB
Fennel	WS	SG	CdeV	AB
Horehound	WS			AB
Plantain				AB
Lupin				AB
Marche	WS	SG(g)	CdeV	AB
Radish	WS	SG(g)	CdeV	AB
Pennyroyal	WS	SG	CdeV	AB
Cockle		SG(g)	CdeV	
Dill		SG(g)	CdeV	AB
Yarrow				AB
Earthgall			CdeV	AB
Ground Ivy				
Celandine				
Attorlothe				
Agrimony	WS			AB
Cumin		SG	CdeV	AB
Red nettle				AB
Garlic		SG	CdeV	
Eoforthrote				
Groundsel				AB
Totals:	10	9	10	18

Note: SG(g) indicates that a herb is found on the St. Gall plan in the kitchen garden as opposed to the herb garden.

However, this does not apply to the Capitulare de Villis which is also closer to the Leechbooks. Thus it seems that a mixed medical tradition was developing on the Continent as well as in England, before the ninth century, though its growth is difficult to trace because of the absence of any surviving vernacular medicine.

In England the Herbal of ps. Apuleius occupies a position midway between the classical medicine of antiquity and the eclectic traditions of the Leechbooks. It does not survive merely because of the Saxon enthusiasm for copying out any classical text, regardless of its merits, since it was felt to be of sufficient practical use to be translated into Old English, and various sections were either added to or reduced.[73] However its limitations must have been quickly apparent, as is suggested by Cyneheard's letter to Lull in the eighth century. Cyneheard, bishop of Winchester asks Lull to send him more medical books, complaining that though there are many such books in England the drugs they describe are unknown and difficult to obtain.[74] Though there is nothing to suggest that Cyneheard is thinking of the Herbal of ps. Apuleius specifically, he evidently means herbals of similar east Mediterranean origin, since these would include many of the herbs which are still unidentifiable.

Such problems must have stimulated the unknown author of the Leechbooks to sit down and, in the same tradition as

---

72. Trans. by H.R. Loyn + J. Percival, The Reign of Charlemagne (1975) p.64-73
73. e.g. section I on betony is reduced from 47 remedies to 29 in the O.E. version, while the section on yarrow includes 11 additional remedies, ps.A. xc, 6-16
74. "sed tamen pigmenta ultramarina, quae in eis scripta conperimus, ignota nobis sunt et difficilia ad adpiscendum." Haddan + Stubbs, op.cit., p. 432

Alfred, to translate the medical books 'most necessary for all men to know'. This information was combined with native herbal traditions and medical knowledge to produce an entirely new textbook. By the end of the Anglo-Saxon period if not earlier the Leechbooks seem to be the major text, judging by the frequency from which they are quoted,[75] while the herbal of ps.Apuleius is less important. Its position may perhaps be compared with that of a major nineteenth century work, such as Creighton's History of Epidemics, which, though still recognised as being an important achievement, is not now much used, because much of the material has been superceded by more modern research.

If one returns to Table 2 again it can be seen that the other text which differs from the rest is Leechbook II. The reason for this is not in its origin, but in its use, for Leechbook II deals with remedies for internal diseases, while the others are mostly concerned with external problems. The emphasis is thus on different herbs, such as dill, marche (wild celery), aloes and cumin, which act mainly on the intestines. Of the top ten herbs three, dill, fennel and aloes still appear in the British Pharmaceutical Codex (1973).[76]

Dill is a mild carminative, nowadays used mainly in children's medicine, particularly in gripe water. In Leechbook II it appears regularly in remedies for nausea, wind and other stomach troubles.[77] Fennel acts in much the same way, though in Anglo-Saxon medicine it is also used for sore eyes and catarrh.

"Aloes is one of the safest and best warm and stimulating

---

75. See Chapter 2, p. 48
76. pp. 165, 13, and 194 respectively
77. e.g. Lbk. II ii, vi, viii, x, xi, xii, xv, xxviii etc.

purgatives to persons of sedentary habits and phlegmatic constitutions."[78] It requires the addition of a carminative to prevent griping, and is so used by the Anglo-Saxons.

> "For all infirmities of the maw; take of the outward parts of the roots of fennel, what is there most tender, remove from the fennel as much as may make a pound and a half, then pour on of vinegar as much as be a sextarius and a half, then let these stand thus together for three nights; after that seethe the roots somewhat in the vinegar and wring them clean from the vinegar; then put a good deal of aloes therein, so much as my weigh an ounce or more, and as much more of mastic and of ammi, as a foreign wort hight; or asarabacca; put in less of them however; mingle all together and then give him three spoon measures." 79

In this remedy the aloes and the asarabacca will act as purgatives, mastic will prevent too much looseness, and the fennel will check the tendency to griping.

The examples quoted of the use of herbs indicate that the Anglo-Saxons already had a detailed knowledge of the medicinal properties of large numbers of plants, and the uses to which they might be put, both singly and in combination. In many cases modern herbal mdeicine merely echoes the remedies of the Saxons.

The majority of medicinal herbs were grown in England, but some, particularly the spices, must have been imported. Among these were pepper, myrrh, mastic, ginger, frankincense, cinnamon, balsam, aloes and others. The letters recording gifts of spices from the Anglo-Saxon missionaries in Germany have already been mentioned, and the spices named are pepper, cinnamon, frankincense, storax, costmary and cozumber.[80] Others were more enterprising in obtaining their spices. The

---

78. Grieve, p. 28
79. Lbk. II, xiv
80. E. Emerton, The Letters of St. Boniface (1940), letters xxxix, lxviii, lxix, 1

Hodoeporicon of St. Willibald records that when St. Willibald was in Jerusalem:

> "he bought himself some balsam and filled a calabash with it; then he took a hollow reed which had a bottom to it and filled it with petroleum and put it inside the calabash. Afterwards he cut the reed equal in length to the calabash so that the surfaces of both were even, then closed the mouth of the calabash. When they reached Tyre the citizens arrested them, put them in chains and examined all their baggage to find out if they had hidden any contraband. If they had found anything they would certainly have punished them and put them to death. But when they had thoroughly scrutinised everything and could find nothing but one calabash which Willibald had, they opened it and snuffed at it to find out what was inside. And when they smelt petroleum, which was inside the reed at the top, they did not find the balsam, which was inside the calabash underneath the petroleum, and so let them go." 81

Balsam occurs in remedies in the Leechbooks,[82] and is mentioned, together with petroleum, in the group of remedies sent by Helias, patriarch of Jerusalem, to king Alfred.[83] It had a high reputation in medicine, and Willibald evidently felt it was of sufficient value to risk death in smuggling it out of the country.

There were however, more orthodox means of obtaining balsam. Spices are mentioned among the list of goods imported into England by the merchant in Aelfric's Colloquy, and by the tenth century both the Italian towns, such as Venice, Pavia and Amalfi, and the Jewish merchants of the Magreb were regularly trading with the East.[84] The Book of Roads and Realms by Ibn-Khurdadbeh describes the four major trade routes, by sea and overland used by Jewish traders travelling from

---

81. Trans. by C.H. Talbot, The Anglo-Saxon Missionaries in Germany (1954) p. 170
82. Lbk. I, ii 2,3
83. Lbk. II, lxiv

France and Spain to India, Sind and China. The routes go both southwards via the Red Sea and the Persian Gulf, and northwards through the Slav countries and the Caspian sea.[85]

The range of spices brought back is evidenced by a ninth or tenth century list of the herbs and spices which the monks of Corbie planned to buy at Cambrai. It includes pepper, cumin, ginger, cloves, cinnamon, galingale, costmary, spikenard, myrrh, dragons blood, indigo, zedoary, storax, calamint, thyme, gotzumber, sage and mastic.[86]

Spices seem to have been readily available in Western Europe by the tenth century or earlier, even if at a price. Nor was the exchange entirely one sided, for Walafrid Strabo records that pennyroyal was exported to the East.

> "They say that Eastern doctors
> Will pay as much for it as we pay here
> For a load of Indian pepper." 87

Strabo also provides detailed information about the growing of indigenous herbs for medical use, in his poem de cultura hortorum, which has been frequently quoted before. He was a monk at Fulda, and later abbot of Reichenau, from 838 to 849, and it was at Reichenau that the poem was probably written. In it he gives an intimate account of the methods used for preparing the ground and the techniques of cultivation, and though the poem is not English in origin it is unlikely that the methods used in Anglo-Saxon herb gardens varied to any great extent.

After a brief introduction on the joys and rewards of gardening the poem begins with Strabo waking up one spring

---

84. R.H. Bautier, The Economic Development of Medieval Europe (1971) p. 66-67
85. Ibid., p. 77
86. L. Mackinney, Early medieval medicine (Baltimore, 1937) p. 169
87. Strabo, op.cit., xix p. 53

morning and finding that

> "this little patch which lies facing east
> In the small open courtyard before my door
> Was full of nettles!"

He immediately sets to and digs up all the nettles with a mattock, destroys the molehills and digs over the ground. The patch is then faced with planks to prevent the soil being washed away, and divided into oblong beds standing a little above ground level. The surface is broken up with a rake and he works in a generous layer of manure.

The ground is now ready for planting, and each herb is given a bed to itself. Some are grown fresh from seed each year, while others are old stock, which have been carefully preserved over the winter. Once planted, the garden is tended and watered from buckets if necessary, until:

> "In a little while the garden is carpeted over
> With tiny young shoots. True, that part there
> Below the high roof is dry and rough from the lack
> Of rain and the heaven's benison; true, this
> Part here is always in shade, for the high wall's
> Solid rampart forbids the sun to enter.
> Yet of all that was lately entrusted to it, the garden
> Has held nothing enclosed in its sluggish soil
> Without hope of growth." 88

The poet then goes on to discuss twenty four different herbs and their uses, all of which, apart from melons (pepones), are included in the Anglo-Saxon texts.

It is difficult to work out the precise layout of the garden, though some hints are given. It is described as facing east, just outside the abbot's, or perhaps the doctor's lodging. It is relatively enclosed, since parts of the garden are permanently in shadow, and it is presumably set against the east wall of the East range, since the gourd is described as being trained against the cloister wall and climbing over

---

88. Raef Payne, Walafrid Strabo: Hortulus (1966) I-III, pp. 24-31

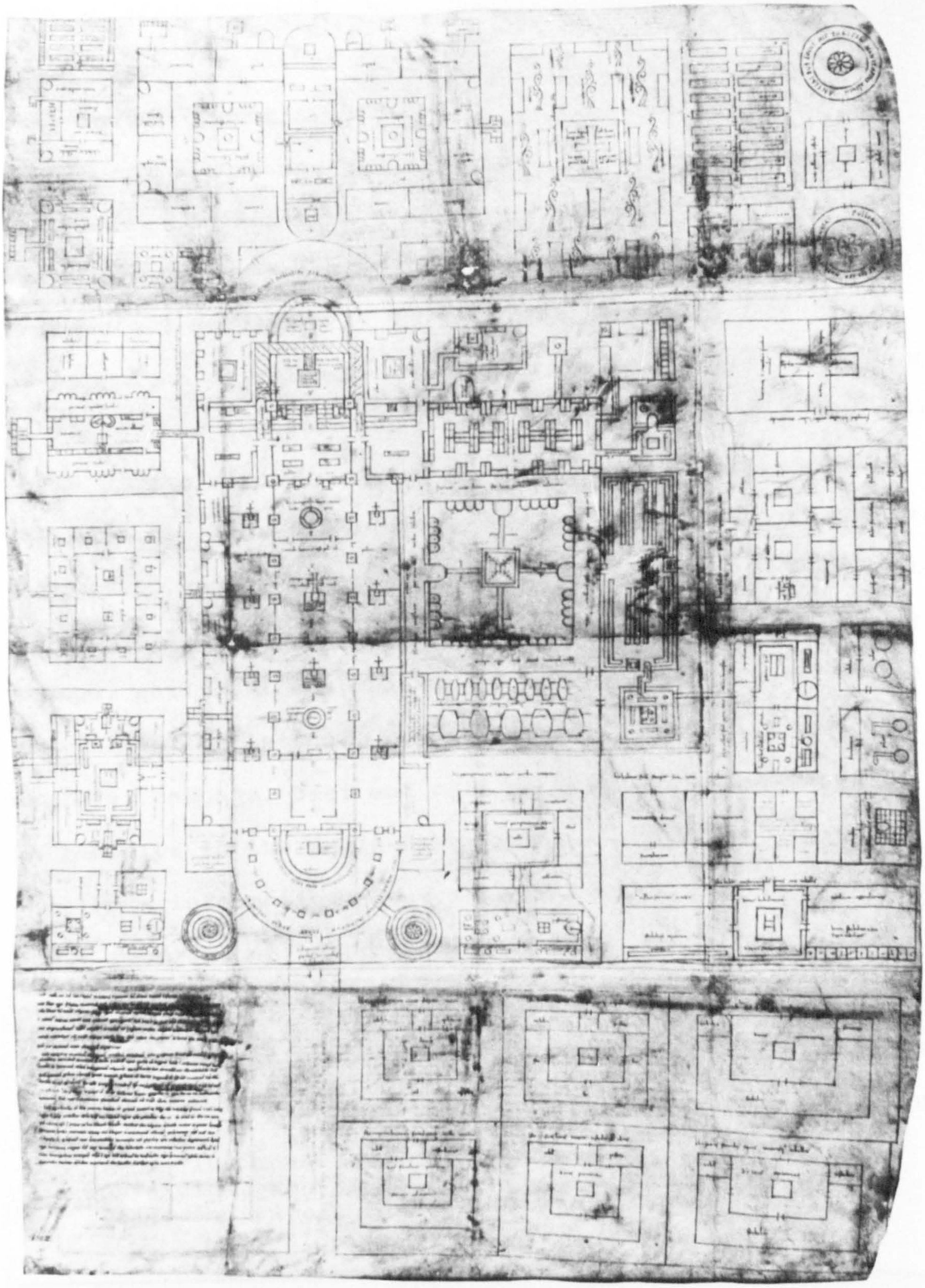


Plate 16. The ninth century plan of the monastery of St. Gall.
(from M.W. Evans, Medieval Drawings (1969), plate 98)

the roof.[89] A detailed plan of a herb garden also exists in the plan of the monastery of St. Gall,[90] which is contemporary with Walafrid Strabo's poem. There the garden is also on the east, or rather the north-east side of the monastery next to the doctor's quarters but separate from it. It is apparently walled and has an entrance on the south side. The garden has sixteen herb beds, fewer than Strabo's garden, which has twenty-four, and each bed is arranged so that it is immediately accessible. It is interesting, but probably no more than coincidence, that sage is in the bed nearest the entrance, and the rose and the lily are in adjacent beds, just as in Strabo's poem. The two gardens have eleven herbs in common - the exceptions in the St. Gall garden being rosemary, fenugreek, cumin, kidney bean (fasiolo) and savory. The plan at St. Gall also includes a kitchen garden, in which are growing onions, garlic, leeks, shallots, celery, parsley, coriander, chervil, dill, lettuce, poppy, savory, radishes, parsnips, carrots, cabbage, beet and corn cockle. All these appear in remedies in the Anglo-Saxon texts.

Some information about an English monastic herb garden comes from one of Aelfric Bata's Colloquies of the eleventh century. The pupils are asked about the trees in the monastery orchard, and then about the monastic herb garden. In answer to the question "Who looks after the garden?" the pupil replies:

> "The monastery gardener and the abbot's physician, who plants the herbs every year and tends and waters them." 91

---

89. Strabo, op.cit., vii
90. R. Willis, op.cit.
91. 'Hortulanus monasterii et medicus senioris nostri, qui eas omni anno plantat et circum fodit et rigat.' Colloq. iv, p. 58 in W.H. Stevenson ed. Early Scholastic Colloquies (Oxford, 1929)

After a little more discussion the pupil gives a list of seventy herbs, some of which are cooked and eaten daily, and the others used in medicine.[92] Though this list is in some ways simply a glossary, and should not be taken to represent a typical herb garden, it is interesting that all the herbs except two are used in the Leechbooks and other texts, and of the top dozen herbs, all except pepper (which would have to be imported anyway) are included in Aelfric Bata's list.[93] It is also interesting that the gardener and the doctor are the same man, as Walafrid Strabo's poem implies as well, and that, like Strabo, he plants his garden afresh each year.

Most herb gardens were presumably about the size of Walafrid Strabo's, and the garden on the St. Gall plan, and many herbs must thus have been collected from the wild, or even on occasion bought at market. The descriptions of habitat given in the Herbal of ps. Apuleius were presumably intended to aid collection, and the phrase, "work thyself dust enough in harvest, when thou hast the worts, and use it when thou hast need",[94] often occurs. This would have referred to the harvesting of the herbs in the herb garden as well as elsewhere.

The usual time for gathering was in the summer, particularly the period from 17 July to 4 September for "leeches say that blossomed worts are then best to work, either for drinks, or for salves, or for dust".[95] Some herbs are to be picked during specific months. For instance, ivy is to be picked in January,[96]

---

92. Ibid., p. 58-59
93. See Table 4.3, p. 94a
94. Lbk. III xii; Lacn. xxiii, clxxviii
95. Lbk. I lxxii
96. Lbk. II xxiv

adderwort in April,[97] tunsingwort in June,[98] and cinquefoil betony, beewort, hartclover, and milotis in August.[99] The phrase 'gather in harvest' is translated by Grattan and Singer as 'gather in autumn', but it seems much more likely that the herb harvest rather than the grain harvest is meant, which would be the July-August period rather than autumn.

July and August are still the most popular months for collecting herbs, since that is when the majority of plants are coming into flower.

> Also "the time of collection markedly influences the amount of active constituents present in the drug ... In many cases it has been established that, at least in the green part of plants, the formation of active constituents is greatest during the most active periods of growth; it thus follows that the content of these constituents is highest at the end of such a period (e.g. at the commencement of flower formation). Leaves also accumulate active principles before and during the flowering period; herbs should thus be collected at that time. The time of day also produces real variations; alkaloid containing drugs, such as belladonna or thornapple (stramonium) are richer in active principles in the morning than in the evening. On the otherhand, certain aromatic labiates increase their content of volatile oil during the afternoon. Plants should not be collected on wet days nor at times when they are still covered with dew." 100

The reason for not collecting plants when they are wet is because they are likely to go mouldy before they are fully dried.

The Anglo-Saxon texts often give detailed instructions as to when a herb should be gathered. Lionfoot should be picked at night when the moon is on the wane;[101] bishopwort,

---

97. ps.A. vi
98. ps.A. Cxl
99. ps.A. iii, ps.A. i, ps.A. vii, ps.A. xxv, ps.A. clxxx
100. Flück, op.cit., p. 15
101. ps.A. viii

lupin, bonewort, everfern, cockle, and elecampane are picked "when day and night divide" (i.e. at dawn);[102] mugwort is picked before sunrise;[103] brooklime should be picked when it is still dewy,[104] and brownwort should be picked when in full blossom.[105] In view of what has just been said about the formation of active constituents in plants these prescriptions seem less superstitious than might otherwise appear.

On other occasions however, the ritual for picking a plant is much more complicated. For instance:

> "Go on Thursday evening, when the sun is set, where thou knowest that helenium stands, then sing the Benedicite and Pater Noster and a litany and stick thy knife into the wort, make it stick fast and go away; go again when day and night just divide, at the same period go first to Church and cross thyself and commend thyself to God, then go in silence and though anything soever of an awful sort or man meet thee, say not thou to him any word ere thou come to the wort which on the evening before thou markest; then sing the Benedicite and the Pater Noster and a litany, delve up the wort, let the knife stick in it, go again as quick as thou are able to Church and lay it under the altar with the knife, let it lie till the sun be up, wash it afterwards and make it into a drink ..."[106]

This remedy has probably the most complicated ritual of any in the Leechbooks, though the ps. Apuleius text is perhaps more inclined to insist on such things. The particular remedy is for elf disease and it is noticeable that remedies for devil-sickness, elf disease, temptations of the fiend and other afflictions of a spiritual rather than physical nature are more likely to include magical or religious rituals in their composition.[107] Where conventional remedies are unlikely to

---

102. Lbk. I, lxiii
103. Lbk. I, lxxxvi
104. Lbk. I, xxxviii
105. ps.A. lvii
106. Lbk. III, lxii
107. e.g. M de Q v, 12; ps.A. x,2; Lbk. I, lxiii,1; lxiv, 1; Lbk. III i; lviii, 1; lxi, 1

have much effect they are bolstered up by an increase in the ritual accompanying their preparation.

The saying of Pater Nosters, psalms, litanies etc. over herbs is not uncommon, and is indicative of the close links between medicine and the Church, mentioned many times before. For a monastic doctor and abbot, such as Walafrid Strabo, to say a prayer over a herb while preparing it for a remedy, was entirely natural and no empty ritual, even if it later became so. It was very much in accord with the attitude of Aelfric who wrote:

> "We should not set our hope in medicinal herbs, but in the Almighty Creator, who has given that virtue to those herbs. No man shall enchant a herb with magic, but with God's words shall bless it and so eat it." 108

It has also been suggested that the saying of Pater Nosters and so on was partly a means of measuring time,[109] so that instead of boiling up a herb for five minutes for example, it was boiled for five Pater Nosters, an Ave Maria and a Benedicite. Such may be the case in the following remedy, which includes the saying of Pater Nosters both at the time of picking the plant, and while making the remedy:

> "A drink for the 'dry' disease; delve about sour ompre, that is sorrel dock, sing thrice the Pater Noster, jerk it up while thou sayest 'sed libera nos a malo', take 5 slices of it and 7 pepper corns, bray them together and, while thou be working it, sing 12 times the psalm Miserere mei, deus, and Gloria in excelsis deo, and the Pater Noster, then pour the stuff all over with wine, when day and night divide, then drink the dose and wrap thyself up warm." 110

Once a herb has been gathered it must be dried and stored

---

108. Aelfric, Homilies, op.cit., Vol. 1, p. 474-7
109. I.B. Jones, "Popular medical knowledge in fourteenth century English literature", Bull. Hist. Med. 5 (1937) 438
110. Lbk. I, xlvii

if it is not required for immediate use, and the texts frequently offer advice on this point.

> "Thou shalt gather /betony/ in the month of August without use of iron, and when thou have gathered it, shake the mold, till naught of it cleave thereon and then dry it in the shade very thoroughly, and with its roots altogether reduce it to dust; then use it and taste of it when thou needest." 111

Or again:

> "for the rheum: Herbive and fiveleaf, adderwort and ladderwort and earthgall. Handle these plants at harvest and shred and dry them and hold them over winter and use them when thou have need." 112

Sometimes the juice is also kept over the winter, as with Hæwen hydele (purple dead nettle); "its ooze and its dust is to be preserved in winter, since it does not appear at every time; its ooze thou shalt hold in a ram's horn; dry also the dust and keep it."[113]

Complete remedies are often made up and put into horns, or more frequently, glass vessels to store them.[114] One remedy prescribes that the vessel should be sealed with glue to keep it fresh,[115] and another, for the half-dead disease, says that elder blossoms and honey should be mixed together and then kept in a box until needed.[116]

Other remedies are made up in quantities which are obviously intended to last for some time. For instance, one salve for a wamb disorder consists of 3 heads of garlic, two handfuls of rue, four pints of oil, one pound of butter, four

---

111. ps.A. I, i
112. Lacn. xxiii
113. ps.A. xxx
114. Horn, Lbk. I ii 16, 21; Lacn. v; glass vessel ps.A. xxxi, Lbk. I iii, 11, Lbk. II vi, 1, xli, xliv; Lacn. xx
115. Lbk. I ii, 3
116. Lbk. II lix, 14

and a half ounces of clear pitch, and 3 ounces of clean wax.[117] The ingredients are to be mixed in a glass vessel and applied lukewarm. Common sense would also dictate that the leech would have ready-made stocks of remedies for the commonest ailments, rather than having to make up minute quantities for each occasion.

Apart from the herbs, which provide the majority of the ingredients found in remedies, various parts of animals are used as well. A short text, the Medicina de Quadrupedibus of Sextus Placitus, deals solely with animal remedies, and is divided up animal by animal, much as the Herbarium of ps. Apuleius is divided herb by herb. In English manuscripts the two texts are always found together.

The animals described are, in order, the badger, hart, fox, hare, goat, ram, boar, wolf, lion, bull, elephant, and dog. On the Continent a longer version is found, which includes various birds as well, but English texts have only this abbreviated version. All the animals, except the badger, lion and elephant, appear in other texts such as the Leechbooks, and the sheep, hen, goose, swine, horse, mouse, ant, snail, swallow and various fish and shell fish also occur. The most popular animal is the goat, followed by the swine, the goose and the sheep.

The remedies consist of the use of the animals' excreta, various organs, and sometimes pounded bones. Gall is also frequently prescribed. Many of the remedies have a strong magical element and work on the basis of association, in that the eating of a part of an animal seems designed to give the patient the strength, courage, cunning or whatever other

---

117. Lbk. II, xxxii

quality is associated with the animal. For instance, a man suffering from devil sickness or an "ill sight" is advised to eat wolf's flesh, and "the apparitions which ere appeared to him, shall not disquiet him".[118] The eating of lion's flesh is also prescribed for the same problem,[119] and presumably the patient is supposed to gain the courage of these two animals as a result.

Other remedies work by association with parts of the body. Incontinence is cured by eating a fried goat's bladder,[120] swollen eyes are treated by putting the eyes of a live crab around the neck of the patient; "he will soon be well."[121]

Sometimes the animals have purely magical qualities in curing complaints, as in the following example:

> "When thou seest a dung beetle in the earth throwing up mould, catch him with thy two hands along with his casting up, wave him strongly with thy hands, and say thrice, 'Remedium facio ad ventris dolorem;' then throw the beetle over thy back away; take care thou look not after it. When a man's wamb or belly fat is in pain, grasp the wamb with thine hands, it will soon be well with the man; for twelve months after the beetle thou shalt have power so to do." 122

It is difficult to see what connection a beetle has with stomach pains, unless it is simply being used as a means of transfering the pain to another object. Being a beetle, the pain would then presumably be buried in the earth, giving an added safeguard against its return to the original sufferer. The idea of transferring pain or illness, usually to an inanimate object, is quite a common one in primitive medicine

---

118. M. de Q. ix, 1
119. M. de Q. x, 1
120. Lbk. I, xxxvii, 1c
121. Lbk. III, ii, 1
122. Lbk. III, xviii

and occurs in charms and other remedies in Anglo-Saxon medicine.[123]

Animal remedies are used for a wide variety of ailments, although they are prescribed much less frequently than herbs. They most often occur in problems concerning childbirth, conception and other aspects of sexual intercourse, - the hare being particularly potent in such areas.[124]

Though many of these remedies sound extremely unpleasant it has been pointed out by Talbot that they have their parallels in Greek and Roman medicine:

> "A glance at Galen's writings will show that he was not averse to recommending burnt frogs, burnt mice, burnt ants, burnt hedgehog head, burnt flies' heads, cat's droppings, dog's, camel's, ox's urine, frog's blood, snake's slough, and other animal products: and the names of the physicians connected with them are invariably Greek, such as Archigenes, Aesclepiades, Charicles, Nicomedes, Crito, Hierophilus, Xenocrates, Harpocrates and so on. When one considers that many of these confections were used as cosmetics, some even as dentifrice, and this during the classical period of medicine, it should come as no surprise that the Anglo-Saxons accepted them as stamped with supreme authority. Galen himself, when prescribing them, had said that he did not repudiate such folk medicine 'for by combining such experience with reason, we have an absolute and rational art!." 125

It is equally true to say that while the Saxons looked back to the Greeks and Romans for confirmation of their remedies, some of the Saxon remedies themselves continued in use into the present century. For instance, a boiled fox's lung in sweetened wine is prescribed for oppression of the chest by the Medicina de Quadrupedibus,[126] and "Syrup of foxes' lung" was a well known remedy, though not necessarily in the

---

123. See Nigel Barley 'Anglo-Saxon Magico-Medicine' J. Anthrop. Soc. Oxford 3 (1972) 67-76
124. M. de Q. iv, 4; 6; 12; 13; 14
125. Talbot, p. 21
126. M. de Q. iii, 6

same form, until recent times.[127] The use of animals in medicine thus has an extensive history, and is not peculiar to the Anglo-Saxons.

The different means of making up remedies fall into three groups: drinks, salves, and poultices. Drinks are usually made of herbs, pounded and mixed in ale, beer, wine, milk or sometimes water. Honey is often added to take away the bitter taste. A typical remedy is:

> "For foot-trouble: Take betony. Boil water, boil away a third part. Give then to drink." 128

Or:

> "For watering eyes: Ashes of harts horn. Put into sweetened wine; reduce them to dust. Take a good cochlear full, an egg-shell full of wine or good ale, and some honey. Give to drink early in the morning." 129

Salves are generally made up with honey, lard, butter, oil and occasionally eggs,[130] and are strained through a cloth in order that small particles may not remain in the ointment.

> "A wound salve: take heads of woad and of nettle, also pound them well, boil in butter, strain through a cloth, add white salt, shake thoroughly." 131

Salves are often applied with a feather, particularly to sensitive spots like the eyes,[132] or with wool used as modern cotton wool.

> "In case that there is a dinning in the ears; take oil, apply it with ewes wool, and close up the ear with the wool, when thou wilt sleep, and remove it again when thou awakest." 133

Poultices include groats, breadcrumbs, flour etc. mixed with other ingredients, which are laid on a cloth and then

---

127. L.G. Matthews, History of Pharmacy in Britain (Edinburgh, 1962), p.7
128. Lacn. cxxvi
129. Lacn. cxii
130. Lacn. xci, Lbk. I, lxix, Lbk. III, lix
131. Lbk. xxxviii, 5

bound on the swelling or other sore spot.

> "for swelling and puffing up of the liver ... lay barley groats soused with wine and then sodden, and this all triturated with vinegar and with honey and sodden again, lay on the thickest cloth or on a skin, swathe up therewith so warm, and bind upon the sore ..." 134

When St. Cuthbert was suffering from an inflamed knee as a boy, it was a poultice of wheaten flour and milk that he was advised to apply to it, and he thus obtained immediate relief.[135]

Other methods of treatment include the application of heat or cold. The man who has a cold or moist natured wamb is told to strike the stomach frequently with warm pitch. "It is also helpful to him that a fat child should sleep by him, and that he should put it always near his wamb."[136] Swines bladders filled with water, oil or warm salt are sometimes prescribed as hot water bottles, or when filled with vinegar they cool an inflammation.[137]

The most frequent means of applying heat was by a steam bath. There were two ways of making these, the first being by boiling a number of herbs and then sitting in the steam from the boiling liquid.

> "A bath for blotch, boil ten times the worts in a basin ... work then a stool of three pieces of wood,with a hole below, sit on a bucket, and robe thee over from above with a garment lest the vapour escape; pour the prepared hot liquor under the stool into the bucket, let it reek on thee. So thou mayst do thrice with the worts, and underneath

---

132. Lbk. I ii 1, 16, 21
133. Lbk. I iii, 11
134. Lbk. II xviii
135. V.A. I, 4
136. Lbk. II xxvii
137. Lbk. II xlvi , xlvii, xli

> stir with a stick if thou wilt have it hotter, and before the bath smear the body and the forehead with sweetened water, and shake up two eggs in hot water, smear the whole body therewith." 138

The other method was to heat up stones in the fire and place them in a trough. Water was poured on to the stones and again one sat in the resultant steam.

> "If the dry disease remain in one place, work a fomentation thus; take the ivy which groweth on stone, and yarrow and leaves of woodbind and cowslip; pound all these well, lay them on a hot stone in a trough, pour a little water upon them, let it reek upon the body, where need may be; when the stone is cool put another hot one in, foment the man so frequently." 139

Such methods provided an efficient means of having a warm bath without the necessity of heating large quantities of water.

Since the Anglo-Saxon pharmacopeia has been discussed in some detail, it seems worthwhile considering whether the herbs used had the physiological action attributed to them. There are many active constituents in plants (not all appearing in any one, of course), and they are listed by Flück as: mineral salts, mucilage, glycosides such as flavonoids and saponins, tannin, volatile oils, resins, bitter principles, and antibiotics.[140] Some of these are more important than others. Mucilage is found in plants such as linseed, fenugreek and mallow. It swells up in water and is thus useful in laxatives, and also in hot compresses since it retains the heat well. Tannin causes the precipitation of proteins. It prevents the development of bacteria and aids healing, as the

---

138. Lbk. I xxxii, 2
139. Lbk. III xxx
140. Flück, op.cit., p. 8-12

proteins necessary for the growth of bacteria are removed, and it contracts blood capillaries and so can prevent certain haemorrhages. Volatile oils are found particularly in the Umbelliferae and Labiatae families, and among those herbs now used mainly for culinary purposes. Their medical action is very variable. In some plants it increases the flow of gastric juices and improves the appetite and aids digestion, and in others it increases the bloodflow to the surface of the skin. Some volatile-oil-containing plants such as juniper and lovage are used in the treatment of dropsy, since they stimulate the secretion of urine. Alkaloids are nitrogenous compounds that act on the nervous system and are powerful poisons. Alkaloid bearing plants such as henbane, hemlock, belladonna, aconite and foxglove, are among those plants still popular in modern medicine, but in herbal medicine their use tends to be avoided because of their potent effects. Antibiotics are found mainly among lower plants such as lichens and fungi, - penicillin being an example, but they also appear in certain higher plants. Burdock is one, buttercup juice is another, and stops the growth of strep, staph, pneumococci, anthrax and tuberculosis germs.[141]

Modern medicine has largely turned away from the use of plant drugs, not because of doubts about their efficacy, which can be great, as the above list shows, but because of the difficulty of obtaining a standard dose. The amount of the active principles in a plant may vary considerably according to the conditions under which it was grown, the quality of the soil, the time it was picked, the way it was stored, and so on. It was this problem which encouraged pharmacists

---

141. M.B. Kreig, Green medicine: the search for plants that heal (1965) p. 163

and chemists to try to isolate the active principles in plants and reproduce them synthetically to a standard format. The quality of the drug produced may thus be more consistent, but the active principles on which it is based are still those of the plant.

It is not to be assumed from this that all the herbs used by the Anglo-Saxons must have had some medicinal qualities. Many, perhaps the majority, had an effect which was only marginal, if it could be measured at all, but equally the herbs which were more valuable were used the more frequently In considering the action of the herbs, one should also look at the uses to which they were being put. A glance at the contents list for Leechbook I shows that the majority of the remedies were prescribed for headaches, eye ailments, coughs, colds, and sore throats, miscellaneous aches and pains, skin diseases, including those caused by worms and lice, cuts, bruises and burns. None of these can be regarded as major diseases, and most would resolve themselves satisfactorily without any medical intervention whatsoever. Even the apparently more alarming list of internal disorders described in Leechbook II often seems to be describing nothing more serious than severe indigestion. The remedies prescribed for these ailments would thus need only to be palliatives to be effective, and Nature would take its course regardless.

The Anglo-Saxon pharmacopeia should thus be seen as one in which a considerable number of herbs had been identified as having positive medicinal qualities, while many others were retained for reasons of tradition or ritual, or were in the process of being discarded. Those herbs which were known to have active properties are often used for the same remedies

today, and within the fairly limited range of complaints for which they were prescribed there is little doubt that they were both effective and reliable.

CHAPTER 5: THE DEVELOPMENT OF THE MEDICAL PROFESSION

The evidence relating to the development of the medical profession and the status of the doctor in Anglo-Saxon society is scanty and often confusing. It comes mainly from saints' lives and chronicles, brief references in the legal codes and penetentials, and from the medical manuscripts themselves. For the pagan period the evidence can only be inferred, but since in North Germany and Scandinavia medicine was primarily in the hands of women[1] it seems likely that the Anglo-Saxons brought a similar tradition with them to England. The earliest references imply that it was women who were the main practitioners of the traditional medicine, but their practices were too closely linked with paganism to survive the conversion to Christianity with any comfort, and the Church made vigorous efforts to stamp them out. Bede rebukes the peasants of the mountainous villages of Northumbria who "at the time of the plague, forgetting the sacred mystery of the faith into which they had been initiated, took to the delusive cures of idolatry, as though by incantations or amulets, or any other mysteries of devilish art, they could ward off a blow sent by God the creator".[2]

Theodore's penetential prescribes penance for women who try to procure health through pagan practices, and perform other heathen rites, in which sometimes even the clergy were involved.

---

1. De Heelkunde in de vroege middeleeuwen (1964) D. De Moulin (English summary p. 155-59)
2. V.P. Chapter 9.

> "2. If any woman put her daughter upon a roof or into an oven for the cure of a fever, she shall do penance for 7 years.
> 3. Whoever causes grain to be burned where a man has died, for the health of the living and of the house, shall do penance for 5 years.
> 4. If a woman performs diabolical incantations or divinations, she shall do penance for one year ... Of this matter it is said in the canon: He who celebrates auguries, omens from birds, or dreams, or any divinations according to the custom of the heathen, or introduces such people into his houses, in seeking out any trick of the magicians; if he belong to the clergy he shall be cast out; if a layman he shall do penance for 5 years." 3

The Canons of Clovesho in 747 also urge the bishop to forbid "paganas observationes",[4] and the revival of paganism as a result of the Viking raids and the Danish settlement provoked legislation from Alfred, Athelstan, and Cnut. Aelfric was sufficiently concerned about the survival of these practices to devote a long diatribe to them:

> "Now I deliver myself as regards God and with love forbid you that any of you should enquire through any witchcraft concerning anything, or concerning any sickness, or seek enchanters to anger his Creator .... Neither shall the Christian enquire of the foul witch concerning his health, though she may be able to tell something through the devil, for it will be harmful, and all will be poisonous which cometh from him, and all his followers shall perish in the end. Some men are so blinded that they bring their offerings to an earthfast stone and to trees and to wellsprings, even as witches teach, and will not understand how foolishly they act, or how the dead stone or the dumb tree can help them or give them health when they themselves never stir from the place." 5

---

3. Haddan + Stubbs, op.cit., p. 190
4. Ibid., p. 363-4
5. Aelfric, Lives of Saints, ed. W.W. Skeat, E.E.T.S. (1881-1900) Vol. 1, xvii

This undercurrent of paganism continued throughout the Anglo-Saxon period, but it does not necessarily follow that the pagan religion survived, - the people who recited charms and brought their offerings to trees and stones may have been unconscious of the religious associations of what they were doing, just as people who are superstitious today are generally unaware of the pagan origin of their actions. The Church, in its eclectic fashion, absorbed many of these orginally pagan ideas into medicine and christianised them, so that instead of Woden and Thor, Christ and His saints were invoked, and instead of praying to the healing herbs themselves, God was asked to show his healing power through the herbs. But inevitably this blurred the distinction between prohibited and legitimate medical practice, and allowed customs previously condemned to become acceptable. According to Aelfric, Augustine "reprehends it as an unallowed charm if anyone bind those herbs on himself unless he lay them on a sore ... No man shall enchant a herb with magic, but with God's word shall bless it and so eat it".[6] However, in the third Leechbook, there occurs the following remedy for headache:

> "Delve up waybroad without iron, ere the rising of the sun, bind the roots about the head, with crosswort, by a red fillet, soon he will be well." 7

Even William of Malmesbury saw nothing unChristian in Wulfstan curing a woman of arthritis by sending her a letter containing the words, "May Jesus Christ heal thee, Segild".

> "The scroll was first laid where the pain was severest, and eased the pain. Soon the woman was altogether rid of her malady, and regained strength." 8

---

6. Aelfric, Homilies Vol. I, p. 474-7
7. Lbk. III ci

The wise women of the neighbourhood seem to have retained their influence as healers throughout the Anglo-Saxon period, in spite of strong opposition from the Church. Their powers gradually turned from benevolent to malevolent purposes, and the Leechbooks include remedies "against every evil rune lay",[9] and "against a woman's chatter",[10] until eventually they came to be regarded as the conventional witch. Nevertheless, women did retain a place in medicine, for they acted as midwives, and probably pediatricians. Leechbook II contains a long section concerning the diseases of women in childbirth, and indicates that male physicians were starting to take some interest in such problems, but in general, attendance at childbirth remained the prerogative of other women, as it was until quite recent times.

The conversion of England to Christianity, and more particularly, the spread of monasticism led to the development of a distinctive medical group, which carried out the care of the sick as enjoined in the Benedictine Rule. The arrival of Theodore and Hadrian in the seventh century probably meant that late Classical medicine was introduced into England for the first time, and was studied in the monasteries. Theodore's knowledge of medicine and his concern for the sick are shown in his penetential. Abbots are urged to accept sick men into the monastery,[11] and they are to be allowed food and drink whenever they want it, as far as possible.[12] At a time of plague the sufferers are still to be visited just as other sick men.[13] He also includes a couple of remedies in one

---

8. Wm. of Malmesbury, Vita Wulfstani, ed. R.R. Darlington (1928) Bk. II, xiii
9. Lbk. I, lxiv
10. Lbk. III, lvii
11. Penet. vi, 14, in Haddan + Stubbs op.cit., Vol. III (1871) p. 190

section:

> "Leporem licet comedere et bonum est pro desintiria, et fel eius miscendum est cum pipero pro dolore." [14]

The close association between the practice of medicine, and religion and learning meant that the medical profession had considerable status, reinforced by the constant use of medical analogies in the writings of the early Christian fathers. St. Augustine frequently uses the figure of Christus medicus in his works,[15] the Benedictine rule often advises the abbot of the monastery to act ut sapiens medicus;[16] and Gregory's Pastoral Care compares the physicians of the mind (i.e. the clergy) with the physicians of the body, who "have such sagacity in their art".[17] The use of such favorable analogies must have continually reinforced an attitude of respect towards doctors and the healing art in general.

At the time of Bede it appears to have been usual for each monastery to have its own doctor, and some, such as Hexham, Lindisfarne, Whitby and Dacre, had several. In this case probably one doctor was in charge and the others were his subordinates. The physicians of Lindisfarne seem to have had a high reputation, and sick men were sent from other monasteries to be cured there. When the doctors failed the powers of St. Cuthbert could remedy their deficiencies.

> "There was in a certain monastery not far away, a youth who was deprived of all use of his limbs by the disease which the

---

12. Penet. xiv, 13, ibid.
13. Penet, viii, 6, ibid.
14. Penet. xi, 5, ibid.
15. See R. Arbesmann, "The Concept of Christus medicus in St. Augustine", Traditio 10 (1954) 1-28
16. e.g. ch. 28 The Rule of St. Benedict
17. ch. 61, Alfred's Version of Gregory's Pastoral Care, ed. H. Sweet, E.E.T.S. (1871)

> Greeks call paralysis. And his abbot, knowing that there were some very skilled physicians in the monastery at Lindisfarne, sent him there, asking whether they would if they could provide some cure for the sick man. On the command of both the abbot and the bishop, they diligently came to his aid, and applied all the medical skill they possessed, yet they availed nothing at all; but rather his disease daily grew worse and gradually he became weaker, until he could hardly move a limb, but only his mouth. But when he lay despaired of and deserted by the earthly physicians who had long laboured in vain, he fled to the divine aid of the heavenly physician" ... and was cured with St. Cuthbert's relics. 18

The position of these monastic doctors is difficult to determine. Bonser states categorically, "since the ecclesiastic was forbidden to shed blood, monasteries had to retain the services of a lay 'medicus' to perform such primitive surgery as was required. Such a medicus (laece) was Cynefrid at Aethelthryth's nunnery at Ely".[19] Nevertheless, there is no convincing evidence for such an ecclesiastical prohibition, or proof that Cynefrid was a layman. As regards the shedding of blood, in AD 637 it is recorded that St. Bricin, abbot of Tuaim Drecain (Toomregan in Co. Cavan), performed an operation on Cennfaeladh, whose skull had been fractured by a sword blow during the battle of Moyrath. St. Bricin removed "his brain of forgetfulness", probably by some form of decompression operation which relieved pressure on the brain causing lethargy and dullness.[20] At the end of the Anglo-Saxon period Baldwin, abbot of Bury St. Edmunds and physician to both Edward the Confessor and William the Conqueror, cauterised the eyes of Bishop Arfast after an accident in which he had been struck

---

18. V.P., chapter 45
19. Bonser, p. 5
20. J. Fleetwood, History of medicine in Ireland (Dublin, 1951) p. 18

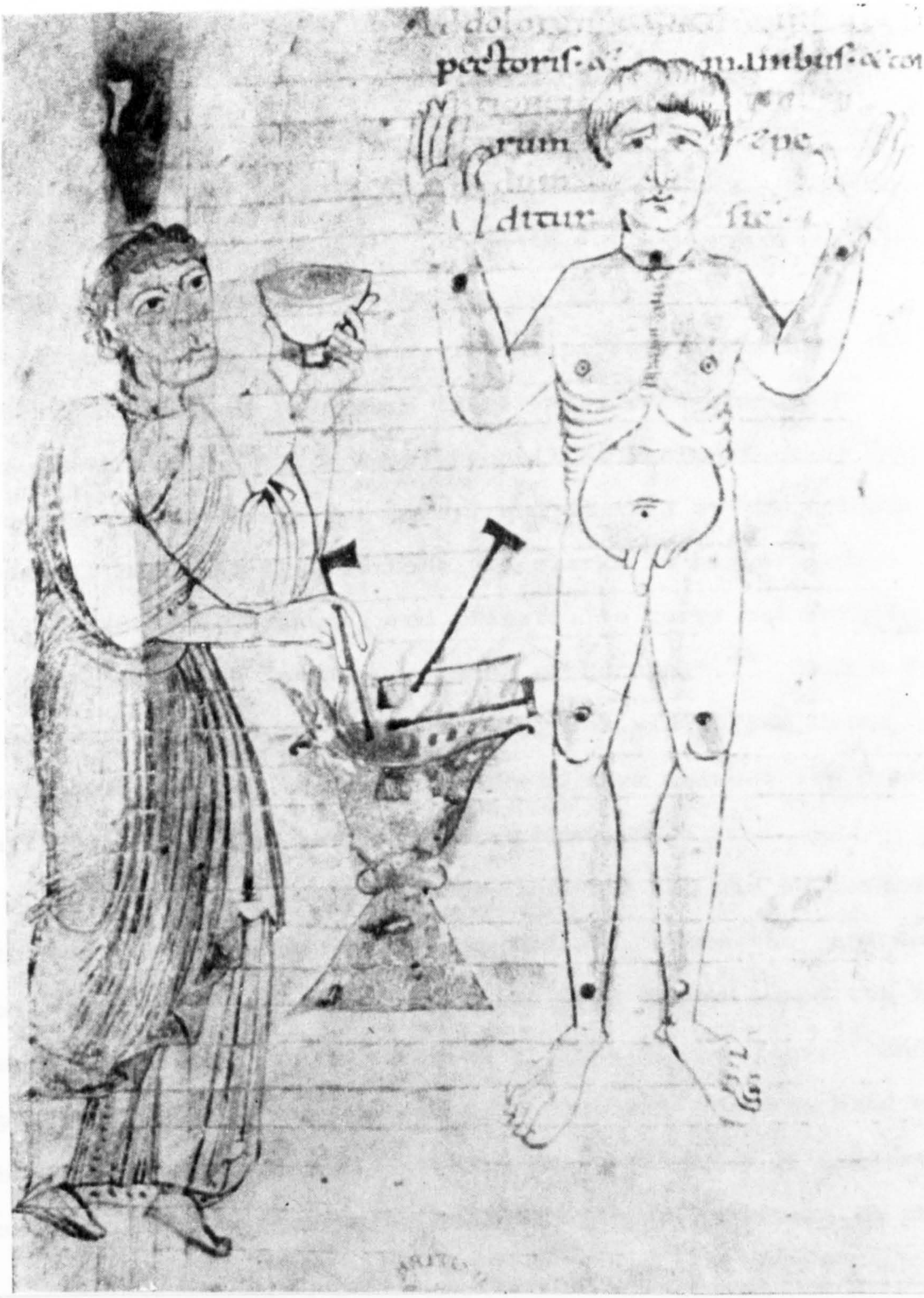


Plate 17. Eleventh century illustration showing an apparently tonsured doctor about to cauterise a patient. From B.M. MS Sloane 2839. Loren MacKinney, *Medical Illustrations in medieval manuscripts* (1965), fig. 49

in the face by a branch,[21] and one of the earliest extant illustrations of cautery in an eleventh century manuscript, shows a physician who appears to be tonsured.[22] Ecclesiastics thus seem to have been involved in surgery throughout the Saxon period, and to have had no fear of shedding blood.

According to Sharpe, "Church authorities seem always to have discouraged priests from performing surgical operations, since a priest responsible for death following the spilling of blood incurs certain impediments to his ritual duties".[23] Nevertheless, ecclesiastics, if not priests, continued to carry out surgery even when there was a recognised lay profession. In 1131 a Papal Council at Rheims forbade monks to practise medicine for money, and in 1215 at the Lateran Council Innocent III "forbade all clerks in higher orders, that is, subdeacons, deacons, and priests, to carry out surgical operations which involved cutting or burning".[24] Such a decree indicates that knowledge of surgery was widespread among churchmen before it was forbidden to them, almost two centuries after the close of the Anglo-Saxon period.

Bonser's supposition that Cynefrid and his colleagues were lay surgeons appears equally groundless, since they did not only perform surgery. A physician from Hexham cured the ring-worm of the boy taught to speak by John of Beverley,[25] and is possibly thesame man who bound up Herebald's broken head after he fell from his horse;[26] while the physicians at Lindisfarne and Dacre are portrayed as using drugs and poultices in their

---

21. Herman, De miraculis sancti Eadmundi c 26
22. BM. MS Sloane 2839
23. W.D. Sharpe, Introd. to "Isidore of Seville: the medical writings", Trans. Amer. Philos. Soc. 54 pt. 2 (1964) p. 31
24. Talbot, p. 51
25. H.E. v.2
26. H.E. v.6

care of the sick. Admittedly the doctors appear to be in a subordinate position. The Lindisfarne physicians were ordered by the bishop and the abbot to attempt to heal the paralytic boy,[27] and bishop John ordered the doctor to bind up Herebald's head. Cynefrith was told to lance Aethelthryth's tumour without apparently having a chance to make a diagnosis himself,[28] though the physicians at Dacre discussed among themselves whether they should operate on the eye of a young monk there, and eventually decided against it.[29] However, the fact that the doctors were given instructions about the patients in their care is no argument in favour of their being laymen. If they were monks their primary duty would be one of obedience to the abbot, and the Benedictine rule makes the abbot ultimately responsible for the sick of the monastery.

> "The Abbot must take all possible care that the sick be not neglected by the Cellarer or servers; because whatever is done amiss by his disciples is laid to his charge." [30]

The abbot's superior position would have been felt to outweigh the medical skill of the monastic physician, and the abbot himself would probably have at least a theoretical training in medicine. Even so, in most cases the abbot's or bishop's instructions to the doctor seem to have been simply that he should take care of the patient, and did not attempt to prescribe the actual course of treatment. It is probable that these doctors were permanent members of the monastic community, as was certainly the case in the later Anglo-Saxon period, since Aelfric Bata's Colloquy refers to a doctor as

---

27. V.P. chapter 45
28. H.E. iv, 19
29. H.E. iv, 32
30 Bened. Rule. c.36

being the monastic gardener as well as the abbot's physician.[31] Whether the doctors were always monks rather than lay brothers is more difficult to determine, though the instances quoted above of the medical activities of Bricin and Baldwin leave no room for doubt about their status as full members of the monastic community.

The attempt to creat a distinction between the lay surgeon and the monastic physician is thus a false one. Throughout the Anglo-Saxon period surgery was regarded as a part of medicine, and the Leechbooks include instructions for surgical operations amongst their other remedies. The word laece is used consistently in Old English literature for a medical man, whether he is referred to in a surgical or a medical capacity. For example, Aelfric:

> "God is the true leech, who by divers afflictions heals the sins of his people. The world's leech is not cruel, though he cure the wounded with burning or the cutting knife. The leech cuts or burns and the patient cries, yet he has no mercy on the other's moaning, for if the leech desist from his craft, then will the wounded perish. So also God cures the sins of his chosen with divers diseases, and though it be wearisome to the sufferer, yet will the good leech cure him to everlasting health." 32

The "world's leech" in this case is obviously acting in a surgical capacity, but there seems to be no sense of a division between ailments requiring surgical intervention and the other divers diseases from which people suffer. It is not until after the Anglo-Saxon period that it is possible to see the medical profession dividing into surgeons and physicians, and indeed other specialist branches such as

---

31. 'Hortulanus monasterii et medicus senioris nostri', Aelfric Bata iv, p. 58 in W.H. Stevenson, Early scholastic colloquies (1929)
32. Aelfric, Homilies, Vol. I, p. 472-3

apothecaries.

Though offering help to those outside the monastery, the monastic physicians were primarily concerned with the sick within their own community, especially as many people seem to have joined monasteries after they became ill or disabled, or felt death approaching.[33] The Benedictine Rule lays out clearly the responsibility of the monasteries to care for the sick:

> "Before all things and above all things care must be taken of the sick, so that they may be served in very deed as Christ himself. For he has said, 'I was sick and you visited Me', and 'as long as you did it to one of the least of these My brethren you did it unto Me' ... Therefore the abbot shall take the greatest care that /the sick/ suffer no neglect. And let a cell be set apart by itself for the sick brethren and an attendant be appointed who is Godfearing, prompt and painstaking. Let the use of baths be granted to the sick as often as it shall be expedient, but to those who are well, and especially to the young, baths shall seldom be permitted. The use of meat, too, shall be permitted to the sick, and to the very weak, but when they are restored to health let all abstain from meat in the accustomed manner." 34

There is little evidence for infirmaries in the early Saxon period, though presumably all the monasteries possessed one. Caedmon of Whitby spent his last hours in "a building to which they used to take those who were infirm or who seemed to be at the point ofdeath",[35] but so far the only building which has been tentatively identified as an infirmary from monastic excavations is Building E at phase D in Winchester, which Martin Biddle suggests may have been the infirmary for the New Minster.[36] On the Continent however, there

---

33. e.g. Sebbi, H.E. iv, 11; unnamed nun at Barking H.E. iv, 9; man from Cunningham H.E. v, 12
34. H. Van Zeller, The holy rule (1958), p. 244
35. H.E. iv, 24
36. M. Biddle "Excavations at Winchester, 1970: Ninth Interim Report", Antiq. J. 52 (1972) 123

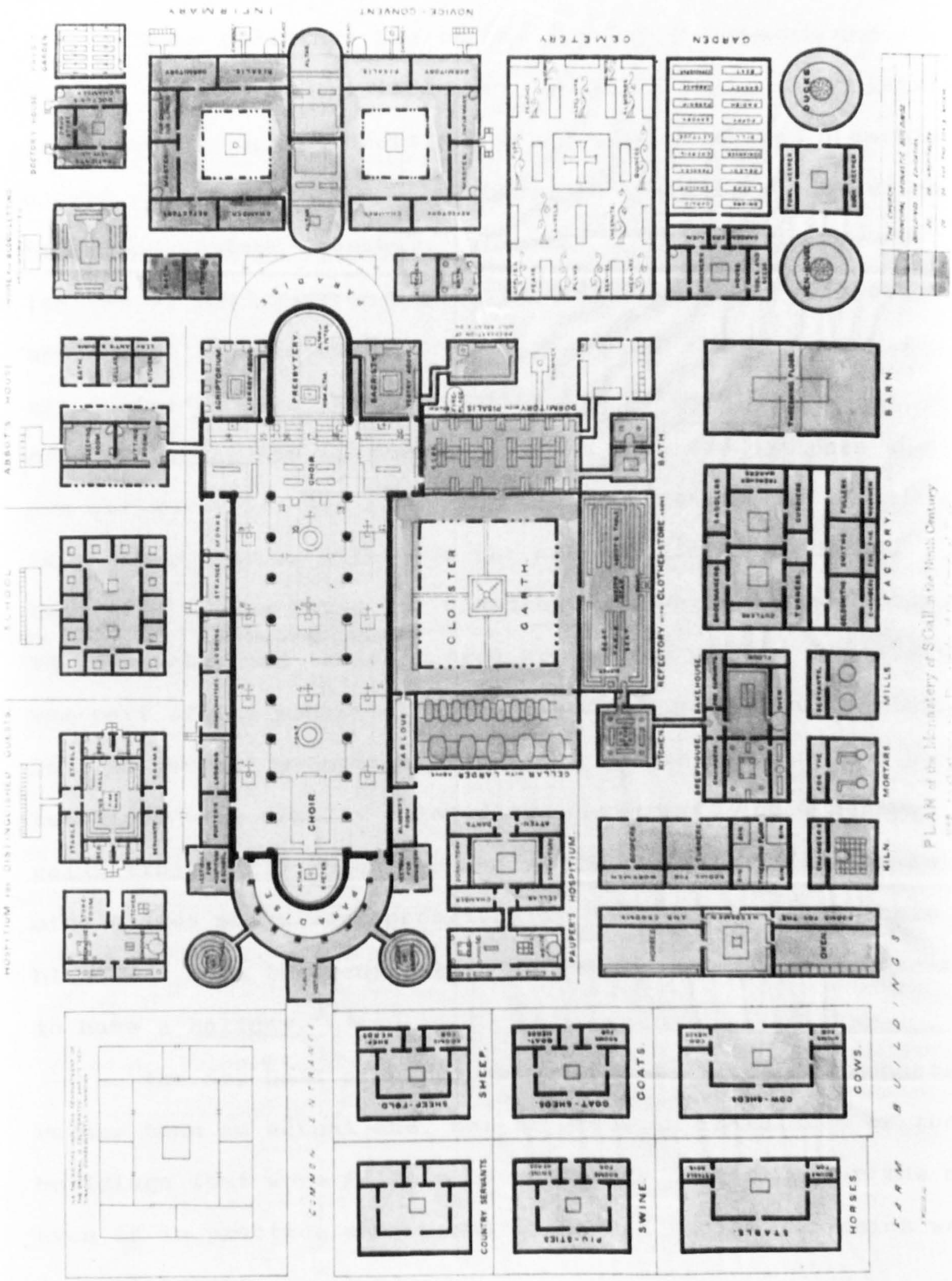


Plate 18. The St. Gall plan, after Willis op.cit. The herb garden, infirmary, and other medical buildings are on the east and north-east side of the monastery.

is the evidence of the ninth century plan of the monastery of St. Gall, which includes a number of buildings used for medical purposes (Plate 18).

These buildings lie to the east of the church and consist firstly of the infirmary, which is built on a cloisteral plan round a central court and lies to the north of a double chapel. To the south of the chapel is a similar court which forms the novices' convent. This has a small infirmary of its own so that novices may be treated separately from other members of the community. To the north of the infirmary is the doctor's house, which contains his private rooms, the drug store for his medicaments, and a room for patients who are seriously ill and requiring constant attention. Next door is the herb garden with beds for sixteen different herbs. Westwards is the house for bloodletting, which has what appears to be benches and tables ranged around the walls. Bloodletting was part of the monastic routine, and was performed regularly for the general promotion of health. Monks who had just been let blood were usually allowed two days rest, and a general relaxation of the rules about diet and so on, and in the later middle ages monks were occasionally accused of having their blood let more frequently than necessary, merely as an excuse to have a holiday.[37]

The St. Gall plan probably shows an idealised monastery rather than an actual one, but it gives an indication of the buildings that were felt to be necessary in caring for the sick, even if in practice many monasteries had facilities which were less elaborate.

---

37. See chapter 3, p. 59

The monasteries offered medical care not only to their own members, but also to anyone in the surrounding community who sought their help. Even so, in the early period monasteries were relatively few, and the majority of people must have been dependent on the wise women of the neighbourhood who still practised the traditional medicine of the pagan period. But in addition to these women there seems to have been a male lay medical profession whose growth paralleled the rise of monastic medicine and who gradually ousted the women as the most important source of lay medical care.

A passage in Bede's Life of St. Cuthbert provides some tentative evidence for this group of doctors. Cuthbert was making one of his periodic tours about his diocese and visiting the widely scattered villages in the mountains between Hexham and Carlisle. The area was so wild and sparsely populated that there was no church, and Cuthbert had to preach in the open air. While he was so doing,

> "Suddenly there appeared some women bearing upon a pallet a youth, wasted with a long and grievous sickness. Placing him on the edge of the wood, they sent to the bishop, praying that he would allow him to be brought to him to receive his blessing. When the youth had been brought to Cuthbert and he saw his terrible affliction,he bade them all go farther off. And turning to his wonted weapon of prayer, he gave his blessing and drove away the plague which the careful hands of the doctors could not expel with their compounds and drugs." 38

It might be argued that Bede's comment about doctors was only a way of saying that earthly means of healing had been unsuccessful, and does not necessarily mean that the boy had been seen by a professional doctor. But healing would then

---

38. V.P. chapter 32.

be left in the hands of the wise woman, and Bede had already denounced her methods of healing as paganism.[39] Had he felt that these practices had been employed in this case he would no doubt have denounced them as paganism yet again. Besides, Cuthbert's credit would be the greater could he be shown to have defeated the forces of pagan superstition, rather than merely showing up the failure of a group of well-intentioned physicians. As there was not even a Church in the area no monastic physician was likely to have wandered so far from his monastery, so the doctors Bede was thinking of must have been laymen, presumably travelling round the villages attending the sick.

These laymen, inevitably, remain shadowy figures. As the surviving evidence for the early Anglo-Saxon period is almost entirely ecclesiastical and interest in medicine is only peripheral, references to lay doctors are unlikely, and since much of their training must have been practical rather than theoretical there would have been little medical literature. But, though laymen, they need not have been entirely illiterate. Bede says that everyone who accompanied Aidan on his travels, "whether monks or layfolk, were required to meditate, that is either to read the Scriptures or to learn the Psalms. That was their daily occupation wherever they went".[40] It was thus evidently expected that these laymen would be able to read. John of Beverley was also accompanied by laymen,[41] who no doubt learned much from him, and there were schools at Dunwich and Canterbury in the seventh century at

---

39. Ibid., c 9
40. H.E. III 5
41. H.E. v. 6

which laymen could be educated. Perhaps "laymen" is a misleading term in this context. There must have been many people in minor orders who had some education in the monastic schools, yet who were not attached to a bishop's familia or a monastery, and so would have been free to act as physicians and travel round the villages, had they so desired. Probably it was only the larger monasteries which had specifically medical texts, but Isidore of Seville's Etymologies and Pliny's Natural History, both of which include medical sections, were well known in England, and would have provided a basic grounding in medicine, supplemented by practical experience.

The attempt to distinguish a specific profession of lay doctors is complicated further by the fact that in a sense everyone must have been his own doctor. In a time of frequent warfare and bloody brawling the injured man must have learned to treat his own wounds, or was cared for by his friends, and so acquired a basic knowledge of first aid. This is suggested by the story of Imma, a young Northumbrian thegn, wounded in a battle between the kings of Northumbria and Mercia. He lay unconscious among the dead for a whole day, but when he recoverd consciousness, "he bandaged his wounds as well as he could; then when he had rested awhile he got up and tried to find some friends to help him",[42] or as the Old English version expresses it, he looked for a friend "to take care of him and attend to his wounds". While engaged in this quest he was captured by enemy soldiers and taken to the ealdorman Ethelred of Mercia. Ethelred, believing Imma's story that he was a poor peasant "ordered him to be given shelter and treatment for his wounds". The ealdorman presumably had men in his service

---

42. H.E. iv. 22

who were concerned with the care of those wounded in battle, since it would be in the interests of everyone that his retainers should have received specialist attention for their injuries. These men would have been semi-professional at least. Such a class of men certainly existed in Scandinavia, as the Saga of Magnus tells how King Magnus the Good was concerned that there was an inadequate number of doctors to care for the wounded men in his army:

> "Then the king went to such men as seemed good to him, and felt their hands; and when he had taken and stroked the hollow of their hands, then named he twelve men who seemed the softest handed, and told them to bind up the wounds of men, and yet none of them had bound a wound before, but all these became the greatest of leeches." [43]

One would expect the kings to have had their own personal physicians too. Bede says that Hlorthere, King of Kent, died while the wounds he had received in battle against the South Saxons were being attended to,[44] a statement which tells us nothing about the status of those who were caring for him; but he also says that Cadwalla was badly wounded while fighting on the Isle of Wight, and was sought out by the Abbot of Redbridge when he was "living in seclusion in the district [of the Gewissae] while he was being cured of the wounds he had recived".[45] Since the abbot had to go and search for the king he evidently had not sought healing at a monastery, and as he was probably being cured secretly because he did not wish it to be known how seriously he was wounded, he was no doubt being attended to by a physician among his own retinue, with apparent success. King Alfred would also have required

---

43. Saga of Magnus ch. 29 trans. Peter Foote, Sagas of the Norse Kings (1961)
44. H.E. iv. 26
45. H.E. iv. 16

medical attention, if Asser's account of his illnesses is to be believed, but no specifically royal physicians are mentioned, and Asser's comment that Alfred's disease was unknown to all the physicians of the island,[46] indicates that the king consulted doctors other than those available to him in Winchester. Nevertheless, there is a tradition of personal physicians. When John of Beverley stayed at his small oratory not for from Hexham, his physician was among the few companions he took with him,[47] and in Aelfric Bata's Colloquy the doctor is referred to as medicus senioris nostri, the abbot's physician, even though he treated anyone who sought his help.[48] It is thus most unlikely that the king had no physicians of his own.

The only royal physician mentioned by name is Baldwin, and he significantly enough, was a Frenchman, for there the tradition of personal and royal physicians was much stronger, and had survived from the Gallo-Roman period. Baldwin was a monk of St. Denis, probably educated in the medical school at Chartres, and his reputation as a doctor was sufficiently well-known for Edward the Confessor to make him his personal physician in 1059. When Edward rebuilt the priory at Deerhurst he gave it as a cell to the Abbey of St. Denis, and made Baldwin prior. In 1065 Baldwin was elected abbot of Bury St. Edmunds, and after Edward's death he continued high in royal favour under William the Conqueror, making frequent visits to the Continent and offering his services to eminent people.[49] However, his

---

46. Asser, Life of Alfred c.25
47. H.E. v.2
48. Aelfric Bata, Colloquy iv p. 58 in W.H. Stevenson, op.cit.
49. C.H. Talbot + E.A. Hammond, The Medical Practitioners of Medieval England (1965)

position seems to have been exceptional in Anglo-Saxon society and there are no records of people being granted wealth or position by the king as a result of medical services.

An interesting problem concerning the availability of medical care is raised by the provision of the law codes. For various crimes the penalties prescribed are the loss of hands or feet,[50] tongue,[51] nose and ears,[52] genitals,[53] and little fingers;[54] while Cnut with true Viking barbarity, imposes almost all of these, and some additions, on a man of bad reputation who has twice failed the ordeal:

> "And if he be guilty at the second time let there be no other bot than that his hands be cut off, or his feet, or both, according as the deed may be. And if he then have wrought yet greater wrong, then let his eyes be put out and his nose, and his ears, and the upper lip be cut off, or let him be scalped; whatever of these then, those shall counsel whose duty it is to counsel thereon; so that punishment be inflicted, and also the soul preserved." 55

Such punishments must have been carried out with someone with some basic medical skill in attendance, if the criminal were not to die either from bleeding for from shock, and it seems to have been expected that the victim would survive. Aelfric tells the story of a man who had lost his eyes and ears as a punishment for theft, having them both restored again at St. Swithin's tomb,[56] and the archaeological evidence shows that the amputations were performed with skill and success. At

---

50. Ine 37; Alfred 6; II Athelstan 14; II Cnut 30,36,49
51. Alfred 32; II Edgar 4
52. II Cnut 30,54
53. Alfred 25
54. III Edmund 4
55. II Cnut 30
56. Aelfric, Lives of the Saints, Vol. 1, xxi

a seventh century site at Teäm , Isles of Scilly, was found the skeleton of a man, aged between 40 and 50 years, who had lost his left hand and right foot. During the healing of the arm the ulna and radius had united into a single stump, but there were only slight traces of reaction, indicating that healing was fast and without much inflammation. Likewise, the bones of the leg had united and were rounded and well healed. The stumps were too neat for the limbs to have been lost in battle, and it is difficult to imagine an accident in which the hand and foot on opposite sides of the body would be sufficiently badly injured for them to be removed surgically. Other causes of injury, such as frostbite, would more likely affect both hands and feet. Mutilation for a crime therefore seems the most probable cause. The amputations were performed a year or two before death, since there is disuse atrophy of the leg, and it is suggested that since a saw was not used, the limbs may have been removed with an axe or knife hammered with a mallet.[57]

The ealdorman of the shire court which prescribed such penalties would presumably be responsible for seeing that they were carried out. Later in the period, when the number of ealdormen declined, and their position became more exalted, the reeve was given greater judicial responsibility and Athelstan makes him responsible for seeing that his ordinances were observed.[58] The Church was also vitally bound up with the administration of justice, and the bishop was present with the ealdorman in the shire court,[59] and exacted the fine for disobedience if a reeve failed to fulfil his obligations.[60]

---

57. D.R. Brothwell + V. Moller-Christensen, "Medico-historical aspects of a very early case of mutilation", Danish. Med. Bull. 10 (1963) 21-25
58. II Athelstan 25
59. III Edgar 5
60. II Athelstan 25.1

Moreover, the ordeal, which was crucial in deciding the guilt or innocence of a defendent, could not be carried out except by a priest. The laws of Edward and Guthrum which, in spite of their name, date from Ethelred's reign and were probably drawn up by bishop Wulfstan of York, [61] indicate that the bishop was involved with the mutilation procedure. Clause 10 states:

> "If a limb-maimed man who has been condemned be forsaken, and he after that live three days; after that, anyone who is willing to take care of sore or soul may help him, with the bishop's leave." 62

The bishop's part was probably to bless all the participants involved in the ceremony and to be on hand to administer last rites in case of disaster. The kin were normally expected to care for the victim, but if they abandoned him the bishop apparently gave him shelter, but not medical attention, until he died or someone else offered to care for him. The actual mutilation must have been carried out by a layman. There is nothing to suggest that these men formed a separate class similar to the executioners of a later period in France, who became experts at setting broken bones and tending the wounds which they had themselves inflicted. As the ealdorman was responsible for seeing justice was done he may also have been responsible for seeing that the felon had proper medical attention afterwards. His own doctors would have been experienced in dealing with wounds and battle injuries, and their skill was of the sort needed to deal with amputations. In fact a limb which is cut right through may bleed less than a severe wound, as the blood vessels contract with shock and thus help to check the

---

61. D. Whitelock, English Historical Documents Vol. I (1955) p.332
62. Thorpe (1840), p. 74

bleeding. Binding up the stump would probably be sufficient treatment, though the Leechbooks prescribe cautory for an amputated limb. Leek leaves and grated salt were then laid on the burn to cool it, and finally the wound was salved with honey for several days.[63] Similar therapy may have been followed in these cases from the courts.

Out of such situations and the exigences of warfare the lay surgeons must have evolved, since surgery requires not so much booklearning as good nerves, steady hands, and an ability to act quickly in an emergency.

The greatest stimulus to the growth of the lay profession must have been the Viking invasions, which effectively ended monastic life, and with it monastic medical practice. Yet the havoc and destruction caused by the Vikings also meant an increased need for doctors. From this period reference to lay physicians increase and indicate a greater degree of organisation and professionalism. Alfred adds a phrase to Gregory's Pastoral Care where he says that a bishop "must travel round the country like a physician and visit the houses of sick men",[64] indicating that there were still men who operated individually and had no definite centre to which those who were ill came for treatment. In the Prologue to his laws he quotes the verses from Exodus:

> "If anyone smite his neighbour with a stone or with a fist, and he nevertheless can go out with a staff; let him get him a leech and work his work the while that he himself may not." 65

It is difficult to decide how far this represented Anglo-

---

63. Lbk. I, xxv
64. Past. Care c. 9
65. Prologue 16 (Exodus xxi, 18, 19)

Saxon medical practice and whether the prologue was intended as working law, but it seems that at least some of its provisions were intended to be observed,[66] and this clause may be one of them.

Medical manuscripts survive from the mid-tenth century, and provide good evidence for a well-educated, secular profession. The earliest manuscript[67] dates from about 950 AD and comes from Winchester, so was written when the Minster there was still full of "clerics of evil habits",[68] before monastic life was restored. The manuscript contains three books of medicine and at the end of the second book is a six line verse colophon:

> "Bald habet hund librum cild quem conscribere iussit,
> Hic precor assidue cunctis in nomine Xristi,
> Quo nullus tollat hunc librum perfidus a me
> Nec vi nec furto nec quodam famine falso.
> Cur quia nulla mihi tam cara est optima gaza
> Quam cari libri quos Xristi gratia comit."

The first two books were thus Bald's personal possessions, and he was evidently something of a scholar, since he knew Latin as well as English, and possessed a number of books. Two other Saxon doctors, Dun and Oxa, are known by name, because they are acknowledged for remedies in the Leechbooks,[69] and phrases such as "leeches who were wisest have taught ...;"[70] "as leeches know how",[71] or "bad leeches think ...",[72] suggest that there was much communication and discussion among doctors about remedies and means of treatment. Certainly, if all the doctors were flocking to Winchester to visit Alfred, there would have been plenty of opportunities to exchange views on medical practice.

Winchester seems to have been an important medical centre, to judge from the number of manuscripts it possessed, though

---

66. Whitelock, E.H.D. I (1955) 332
67. B.M. Royal 12 D xvii
68. Chron. Abingdon II 260
69. Lbk. II lxv 2; Lbk. I xlvii 3
70. Lbk. I lxxii

this prominence may in part be due to mere accident of survival. However, as well as the Leechbooks it possessed a partial copy in the Bede manuscript, and two others, both containing a treatise on bloodletting and various charms.[73] Other places which had manuscripts containing either complete medical treatises or flyleaf charms and remedies are Christ Church, Canterbury, Exeter, Worcester, Peterborough, Bath, Glastonbury and Rochester. There are also a number of manuscripts with no provenance. Some of these are a witness to the revival of monastic medicine after the tenth century monastic reforms, for the Regularis Concordia reiterated the injunctions of the Benedictine Rule concerning care of the sick; but others are secular manuscripts. Apart from the Leechbooks there is the Lacnunga text, which seems to be the handbook of a lay physician, and contains a larger number of pagan charms and magical elements than is common in the other texts.

By the end of the Saxon period lay physicians seem to have ousted the monasteries as the major source of medical care. A penetential in an early eleventh century manuscript, ascribed to Theodore, but consisting mainly of Frankish penetential material,[74] assumes that professional lay help rather than monastic care will be sought in case of injury. One clause says:

> "Qui per rixam ictu debilem vel deformem hominem fecerit, reddat impensas in medicos, et maculae precium, et opus eius donec sanetur restituat, et dimidium poeniteat." [75]

This largely reiterates the injunctions of Exodus, quoted in the Prologue to Alfred's Laws, and seems based on the same idea.

---

71. Lbk. I xxxv; Lbk. II xxvii, xxviii
72. Lbk. II xxxi
73. B.M. Cotton Titus D xxvi, xxvii; B.M. Cotton Vitellius E xviii

The Leis Willelme, which, though written between c. 1090-1135, refers mainly to Anglo-Saxon practice, also mentions the physician's fee:

> "Si hom fait plaie en auter e il deiue faire les amendes, primereinement lui rende sun lecheof; e li plaez iurra sur seinz, que pur meins nel pot feire, ne pur haur si cher nel fist." 76

This means, if a man wounds another and must pay compensation, he must first pay the physician's fee; and the wounded man must swear by the saints that he could not have been cured for less and that he did not increase the price through hatred.

Some interesting points about medical practice at the time of theNorman Conquest are suggested in the Life of St. Wulfstan. A young woman living in Evesham became mad, and grew increasingly violent, while her parents did their best to find a cure for her.

> "They hired physicians to heal the distemper by the art of physic. They brought priests to recall her mind by healing exorcism. Among them came the Prior of Evesham, who told and testified the truth of it to Coleman: but he, like the others, went away disappointed. For although physicians and clerks did their utmost, they wasted their medicine and their exorcisms. And indeedher kinsfolk spent most of their substance, and were left without hope or counsel." 77

In despair they again asked help from the prior, who suggested they should take her to bishop Wulfstan. They did so, and she was cured by his blessing. It is interesting that the girl's parents took her to the doctors before they sought aid from the Church, even in a case of devil possession,

---

74. MS. C.C.C.C. 190 in Haddan + Stubbs op. cit., p. 175
75. Ibid., xxi, 25
76. B. Thorpe, Ancient Laws and Institutes of England (1840)
77. Wm. of Malmesbury, Vita Wulfstani Bk II, 4

and presumably they thought the doctors had some chance of a cure, or they would not have been prepared to spend so much money.

Another reference concerns a woman in the village called Wich, in the diocese of Worcester.

> "There dwelt a woman, who was born neither to great wealth nor to abject poverty. She was married to a husband of the like middle fortune and kept house as fitted their estate. But no prosperity abides unshaken: never does happiness smile on poor mortals without a cloud. Her easy life was marred by a sudden malady; a malady which seized not only on one member, but on every limb, and stiffened and knotted all the joints. Day by day she grew worse, and was forced to keep her bed. The poor woman and her husband likewise sought such aid as they could afford from physicians. The physicians did their best and plied their craft, but what they could not do, they made up in promises, but all their consultations were to no purpose. Fortune made all their diligence of none effect, fortune, or as I would sooner believe Divine Providence, perceiving that here was a task for his Bishop. And now all their store was spent; and the woman, despairing of human aid, fled for help to Christ; right wisely and prudently." 78

She sent a message to Bishop Wulfstan, and received in return a letter saying "May Jesus Christ heal thee, Segild". When she laid this where the pain was worst it eased the pain and eventually cured her.

Both these stories show that there was still the same respect for the healing powers of the medical profession in the eleventh century as there was in the eighth. The doctors "did their best", and were "diligent", even though they were unsuccessful; and they can hardly be blamed for lack of skill in these two instances, since even today psychiatry has only variable success, and there is still no cure for arthritis. The physicians evidently belonged to a group practice, and

---

78. Wm. of Malmesbury, Vita Wulfstani Bk. II, 13

Plate 19. A doctor in secular dress cauterising a patient. From Durham MS Hunter 100a, early 12th century.
(M. W. Evans, Medieval Drawings (1969), plate 62.)

seem to have been hired as a body since they consulted together over the second case. Both patients were visited in their own homes. Since the woman with arthritis was of "middle fortune" and living in an apparently small village, professional care was obviously not just the prerogative of the rich, though a long illness could reduce the family to bankruptcy. Presumably then, treatment for injuries and at least the initial treatment of an illness by professional physicians, would not be beyond the means of any but the poorest peasants, and those who could not afford to pay could still seek help from the monasteries. Neither account makes it clear whether the physicians belonged to the individual village or came from farther away. Probably, as they were a group, they worked from one centre and covered several villages, though physicians in towns no doubt had different arrangements. Illustrations of doctors in medical manuscripts of this period always portray them untonsured,[79] often bearded and in normal secular dress.[80] Usually they are shown performing minor surgical operations and are laying into their patients with evident enthusiasm; but happily their victims seem to be facing their ordeal with cheerful stoicism. It seems to have been expected that the medical profession should have high standards and the doctor was considered to have a duty to attend to the sick at all times:

> "If a good physician, who well knows how to cut wounds, sees that someone has need of him, and from sloth is neglectful and witholds his help we will say that he is very rightly guilty of his brother's death, because of his own sloth." 81

On the Continent various treatises survive in medical manuscripts giving instructions on ethics, codes of behaviour

---

79. With the possible exception of MS Sloane 2839, noted above.
80. E.G. Durham, Hunter 100a, BM Harley 1585; Oxford, Bod. Ashmole 1462
81. Alfred's Version of Gregory's Pastoral Care ed. H. Sweet E.E.T.S. (1871) c.49

Plate 20. Two doctors performing operations for cataracts and nasal polyps. Similar illustrations appear as early as the 11th century, though the operations are rarely described in the texts. From Oxford, Bodley MS Ashmole 1462 (12th century).

and practice, and so on.[82] The earliest manuscript has a copy of what is probably a late eighth century text,[83] and shows a straightforward, practical attitude to medicine:

> "...one ought not to spurn earthly medicine since he knows it is advantageous rather than harmful, and since it has not been held in contempt by holy men ... Therefore he who does not seek medicine in time of necessity deserves the name stupid and imprudent. I say that it is wise to do well by the physician while you are well so that you will have his services in time of illness." 84

Other texts emphasise the qualities and training required by doctors. One which appears in three early manuscripts,[85] takes the form of a letter from Arsenius to Nepotian describing the secular qualifications of early medieval physicians:

> "... /The physician should/ not be hesitant or timid, turbulent or proud, scornful or lascivious, or garrulous, a publican, or a woman-lover; but rather full of counsel, learned and chaste. He should not be drunken or lewd, fraudulent, vulgar, criminal or disgraceful; it is not right for a physician to be taken in a fault or to blush for shame in the presence of his people. Even as love of wisdom reveals itself in manners, so let him be irreproachable, for he is chosen to a higher honour. Medicine is not to be scorned but invoked. Inasmuch as the physician has high honours he should not have faults, but instead discretion, taciturnity, patience, tranquility and refinement; not greed but more of restraint and subtlety, rationality, diligence and dignity.
> ...According to the secret teachings which should be pursued in medical instruction, let the physician be cheerful because he is the gentle helper /of his patients/. Enlivening the body, checking illnesses, drying up humours, he prescribes diet, eliminates fevers, warms the marrow, gives remedies, recreates the vital power. He notes the symptoms of ailments and applies beneficial medicines. He shows himself an expert in the varieties of herbs and a healing practioner who prepares intelligent

---

82. See L. Mackinney "Medical ethics and etiquette in the early Middle Ages: the persistence of Hippocratic ideals" Bull. Hist. Med. 26 (1952) 1-31
83. Bamberg MS L III 8

> remedies for the reviving of men's strength. He clarifies the present, reveals the eternal future and senses inner factors. The physician is said to be the preceptor of healing, the liberator, the opportune worker who renders aid in time of need." 86

Other texts give details of education, dress, manners, behaviour towards women patients, and other matters of etiquette. After the eleventh century they become increasingly worldly and include such advice as "Never become involved knowingly with any who are about to die or who are incurable"; and "At the outset, accept at least half of the remuneration without hesitation, for he who wishes to buy /your services/ is disposed to pay and to beg /for treatment/. Get it while he is suffering, for when the pain ceases, your services also cease". By the time Salernitan medicine became dominant in Western Europe this materialistic element was much more apparent.

There is no evidence that these texts were known in England in the Anglo-Saxon period, but considering the close links between England and the Continent it is possible that these and similar texts were in circulation. Rabanus Maurus' De Universo includes a section on medicine, part of which appears to be derived from the treatise in the Bamberg manuscript, quoted earlier, and Aelfric writes of medicine in very similar terms.

Even if such codes of ethics were not known, medicine seems to have been held in high repute by the Anglo-Saxons

---

84. Mackinney, op.cit., p. 5
85. Paris B.N. MS. 11219; 9th century; St. Gall MS. 751; 9-10th century; Brussels MS. 3701-15; 10th century
86. quoted by Mackinney, op.cit., p. 11-12

especially considering the nature of the sources. Saints' lives, for instance, invariably portray the doctor in a bad light since it is usually because earthly medicine has failed to cure a sick man that the healing power of the saint is invoked. Yet the attitude to the doctor which emerges is one of respect and admiration for his work. Bede speaks highly of doctors, even when recounting their failures. In describing Cuthbert's swollen knee he makes him say, "no doctor with all his care can heal me",[87] and when he later cures a boy by prayer "he drove away the plague which the careful hands of the doctors could not expel with their compounds and drugs".[88] The impression given is that when a doctor is unsuccessful it is not due to lack of diligence or skill, but rather to the nature of the disease or the will of God.

This attitude is in sharp contrast to that of Gregory of Tours, writing of Merovingian medicine a century earlier. He was most suspicious of the medical profession and a great believer in potio de pulvere sepulchri Sti Martini, as a universal panacea.

> "What can the doctor do with their instruments? It is more their concern to cause than to relieve pain. When they open the eye and cut into it with their sharp lancets they make the patient suffer agonies in any case before they help him to see again. And as soon as some precautionary measures are not followed it is generally all up with the eyesight. Our dear Saviour on the other hand, has only one instrument, His will, and only one salve, His healing power." 89

---

87. V.P. chapter 2. [illegible]
88. Bede, Ibid., c 32
89. Quoted by K. Pollak + E.A. Underwood, The Healers (1968) p. 77

This can be compared directly with Aelfric's comments: "The world's leech is not cruel, though he cure the wounded with burning or the cutting knife ... for if the leech desist from his craft, then will the wounded perish".[90]

It is true also that Gregory is not completely typical of Continental attitudes. Alcuin was favourably inclined towards doctors,[91] though he, perhaps significantly, was an Anglo-Saxon. Einhard also was largely uncritical.[92] But Gregory remains a powerful voice of dissent, of which there is no sign in Anglo-Saxon literature. There are rare mutterings: a man who became blind despaired of curing his eyes with "useless fomentations and juices," and turned to Guthlac for help,[93] and William of Malmesbury can perhaps be detected in cynicism in saying that what physicians could not do "they made up in promises";[94] but even so he describes the doctors as doing "their utmost" and being "diligent", so in general he was sympathetic. The overall attitude towards the medical profession is favourable, and the reputation of the doctors remained high throughout the Anglo-Saxon period.

It may be that all the foregoing gives rather too favourable a picture of the Anglo-Saxon medical profession. Particularly when the evidence is so sparse for the early period, there is a tendency to make a professional leech out of a man to whom any medical knowledge at all can be attributed, when he may just have been applying treatment which common-sense suggests, with no pretensions to being a doctor. Even

---

90. Aelfric, Homilies ed. B. Thorpe (1843-6) Vol. 1 p. 472-3
91. For egs. cf. L.C. Mackinney, Early medieval medicine (Baltimore, 1937) p. 85 ff.
92. e.g. Annales an. 817, P.L. civ
93. Felix, Life of Guthlac, ch. 53
94. Wm. of Malmesbury, op.cit., Bk. II, xiii

today there are a large number of minor ailments which people treat themselves without recourse to a doctor, and in the past when all treatment had to be paid for the number of complaints treated with self medication must have been considerably larger. The actual number of professional doctors may thus have been much smaller than suggested, and what were perhaps isolated exceptions may have been used to typify the country as a whole. But the apparently organised, educated and experienced lay medical profession, for which the evidence is clear in the tenth century, could not have sprung fully armed out of nothing, even if its ranks were swelled and perhaps its standards improved by the addition of monastery-less monks, who abandoned the habit to become professional leeches. Obviously the knowledge of men such as Bald, Dun and Oxa would not have been universal, - they must have been the Harley Street doctors of their day; but the number of extracts from the Leechbook of Bald in other manuscripts, and the existence of similar works from different sources, such as the third Leechbook, indicates that these were the standards aimed at.

It is true that the Saxons' knowledge of surgery and anatomy was small, and that their medical armoury was limited when faced with serious diseases. Pagan charms and methods of healing continued to be practised throughout the period and even professional medicine included charms and other rituals. However such things were part of the mental make-up of the time, - one cannot expect a scientific attitude to medicine in an unscientific age.

The Saxons made good use of such medical knowledge as was available to them, and where their drugs failed religion sometimes succeeded. The associations with medicine

and the Church were thus beneficial rather than harmful, and Christianity's insistence on the altruistic care of the sick and disadvantaged gave medicine a positive impetus.

The resulting attitude of concern towards the sick man, and the genuine desire to relieve his suffering is expressed in texts such as the Leechbooks, and is one of the things which stands out clearly from the evidence for Anglo-Saxon medicine. The other thing is the respect and admiration shown towards the doctor, which appears in all the references to him in non-medical works. Such mutual sympathy must have been advantageous, and since a patient who has confidence in his doctor's ability to heal him is well on the way to a cure, the Anglo-Saxon doctors cannot be called unsuccessful.

CHAPTER 6: MENTAL DISORDERS

During the Anglo-Saxon period, and indeed throughout the Middle Ages the term "devil possession" or "devil sickness" was used to cover all forms of mental disorder, such as epilepsy, hysteria, insanity and convulsions. But apart from this blanket term there are a number of other words which are used to describe different shapes and forms of mental disturbance. Epilepsy is fylle seoc[1] or braec seoc,[2] and insanity monoð seoc,[3] in reference to the idea that fits of madness were related to phases of the moon. Gewitleast and wedenheortnysse are all equated with the classical word frenesis, frenzy or delirium, or according to the pseudo-Apuleius text, "wið þa adle þe grecas frenesis nemnað þ is on ure geþeode gewitlest þæs modes þ byþ ðonne þ heafod aweallen."[4] In most cases this group of words is used to express the physical symptoms of the disease, such as convulsions, foaming at the mouth and so on, whereas braec seoc and monað seoc are the different names of individual mental disorders.

In classical medicine frenesis is a general term applied to the mental disorientation often accompanying severe fevers, and it is rarely confused with psychiatric disorders or with epilepsy.[5] Though the Anglo-Saxons used frenesis or freneticus rather loosely they also recognised that there was an organic cause of delirium and distinguished it from devil possession. William of Malmesbury quotes the case of a monk who was apparently dying from a severe fever, but who was cured by

---

1. T. Wright + R.P. Wulcker, Anglo-Saxon and Old English Vocabularies 2nd ed. (1902) 112, 26, 27
2. Lbk. II, lix, 12
3. ps.A. x, 2; lviii, 2
4. ps.A. xcvi, 4
5. Caelius Aurelianus, De morbis chronicis 1, 5-6

the prayers of Bishop Wulfstan.

> "All his weakness fled, and strength and health abounded to drive out the disease. Straightaway he was fain to rise and called for his raiment and his shoes, rejecting the bed whereon he had lain so long. His brethren thought he spoke with wandering mind, as does befall when the brain is disordered and the seat of reason troubled, and sick men utter words at random." 6

The Leechbooks also give an indication that mental disorders were seen as having a possible physical cause. A man is described as <u>feond seoc</u> "when a devil possesses the man or controls him from within with disease",[7] and the group of remedies for devil sickness, epilepsy and enchantments are interspersed with those for fevers and <u>lencten adl</u> and use a similar group of herbs.[8]

The late Classical authors regarded psychiatric disturbances as chronic diseases and divided them into three main groups, epilepsy, mania and melancholia. According to Isidore of Seville, whose <u>Etymologies</u> were well known in the Saxon period:

> "Epilepsy, <u>epilemsia</u>, is named because hanging over the mind it equally also possesses the body ... It arises whenever the black bile happens to develop in excess and is turned in its course to the brain. This disease is also called the 'falling sickness', <u>caduca</u>, because the sick man, falling down, <u>cadens</u>, suffers convulsions.
> These the common people call 'lunatics' since under the influence of the moon's cycle, <u>lunae cursus</u>, the snare of demons snatches them up. This likewise accounts for the term "ghost-ridden" <u>larvaticus</u> ...
> <u>Mania</u> is named from 'insanity' or 'fury', because the ancient Greeks called fury MANIKH, either from 'unpropitiousness', <u>iniquitas</u> which the Greeks called <u>manie</u> or from "divination" because the Greeks

---

6. <u>Life of St. Wulfstan</u>, <u>op.cit.</u>, I, 15
7. <u>þonne deofol þone monnan fede odde hine innan gewealde mid adle</u>, Lbk. I, lxiii
8. Lbk. I, lxii-lxvi

> say MANEIN for 'to divine'
> Melancholia is named for black bile, the
> Greeks call black MELAS and bile CHOLH.
> Epilepsy arises in the phantasy; melancholia
> in the reason; mania in the memory." 9

Elsewhere he also says, "those men are called melancholy who flee from human society and suspect even their dearest friends."[10]

A somewhat confused version of this disease causation occurs in the second Leechbook, Cockayne quoting Alexander of Tralles as the source.

> "Also from disease of the maw come many
> and various diseases of bursten wounds
> and cramps and epilepsy and fiends
> disease, and mickle murmurings and
> uneasiness without occasion ... and sore
> internal diseases in foeminae naturalibus
> (i.e. the uterus) ... and despondency;
> and immoderately long wakings and witless
> words. The maw is near the heart and the
> spine and in communication with the brain,
> from which the diseases come most violently,
> from the circumstances of the maw and from
> evil juices, venom bearing." 11

Black bile is traditionally associated with the spleen (milt in O.E.), but the basic idea of an evil humour rising into the brain, and causing mental derangement is retained, and it is interesting that though fienda adl is mentioned specifically its origin is ascribed to a purely physiological cause.

The diseases of the uterus which are mentioned probably refer to hysterical attacks, which were thought to be caused by movements of the womb around the body, thus compressing other organs and causing paralysis, anaesthesia and epileptiform attacks in women.[12]

A different passage in Leechbook II speaks of the need for

---

9. Isidore of Seville, Etymologies iv. 7. 5-9, in W.D. Sharpe, op. cit.
10. Ibid., x, 176
11. Lbk. II, i
12. See Ilza Veith, Hysteria: the history of a disease (Chicago, 1965)

purging the body of the evil humours which gather in the wamb during the winter. If this is not done at the beginning of Lent: "then there cometh of the evil humours either hemiplegia, or epilepsy or ... leprosy ... or erysipelas."[13] The humours which rule the winter months are black bile and phlegm, the instigators of chronic disease and insanity, and it is noteworthy that even today a higher incidence of suicides and severe depressions are recorded in January and February, the beginning of Lent, suggesting that though the causation would not now be accepted, the original observation was not at fault.

Isidore, in the quotation above, refers to the belief that madness was caused by demons, and this idea is virtually universal. The Church, in addition to its ordinary medical care, made the casting out of devils a special function, and the exorcist was fifth in the seven orders of the Church, coming below the subdeacon and the acoluthus, or taper bearer.[14] Nevertheless, whenever references to exorcism are made in the general literature of the period, they are in most cases performed by priests, many of whom seem to have considered it a regular part of their duties. The method of exorcism seems to have been by the laying on of hands[15] and saying of special prayers. The Old English version of Bede's Ecclesiastical History, in a slight variant on the Latin version, recounts how an epileptic, who was staying overnight in a double monastery, was attacked by a fit during the night. The abbess was called and brought with her a priest. "The priest chaunted and recited an exorcism which was composed for this sickness

---

13. Lbk. II, xxx
14. Canons of Aelfric x, in Thorpe, op.cit.
15. Excerptiones Ecgberti 84, in Thorpe, op.cit.

and did all that he knew to be best for it, but still produced no effect by this."[16]

St. Wulfstan was rather more successful in curing a man who lived at Cleeve, and the words of his prayers are recorded:

> "Spreading his hands to Heaven he prayed: Lord Jesus Christ, who by thy death hast delivered the race of man from the power of the Devil; who didst suffer the Legion cast out from a man to go into the swine, deliver this man from the devil, and give him back his right mind. Then, turning to the evil spirit: Depart, foul spirit from this image of God, and give honour to the Holy Spirit." 17

It is unlikely that these were the precise words spoken by Wulfstan, but they record the general form of exorcism in the eleventh century. Other prayers of the same period are to be found in the Leofric Missal.[18]

The practice of exorcism seems to have had a rather poor success rate, especially considering the ecclesiastical bias of most of the sources. A young man named Hwaetred became mad and was taken by his parents "to the holy places of the saints, so that he might be washed in holy water by priests and bishops. But none of them could quench the pestiferous poison of the deadly spirit and at length after every kind of application and remedy had been tried and rejected they returned home".[19] A boy in the Lindisfarne estate was similarly afflicted. "A priest was sent from the monastery to the demoniac boy, and although he had been accustomed to put impure spirits to flight by the grace of exorcism, he could nevertheless do nothing to help the possessed

---

16. H.E. III.11 Song he se maessepreost 7 raedde orationem, þa ðe wiđ þaere adle awritene waeron, þa þing dyde, þe he selust wiđ þon cuđe
17. Life of Wulstan, op.cit., II.5
18. F.E. Warren ed., The Leofric Missal (Oxford, 1883), p. 232-5
19. Felix, Life of St. Guthlac 41

boy".[20] Again, of a demoniac woman, "although physicians and clerks did their utmost, they wasted their medicines and their exorcisms".[21] However, in all these cases the failure of the exorcist was rectified by the action of some more powerful ecclesiastic, and in rational terms there are only a certain number of mental states, such as neuroses and some functional disorders, which are likely to respond to such persuasion. A high rate of success cannot thus be expected. It is also not surprising that bishops and putative saints were more successful at curing demoniacs than ordinary priests, who, being better known to their patients, were probably tainted with the common clay. But men such as Cuthbert and Wulstan, backed by their high status in society, their charismatic personalities, and with all the powers of God and his saints in support, had more powerful weapons at their disposal than the modern psychiatrist, when dealing with disorders that could be mitigated by suggestion alone, and this in large part accounts for their success.

The attitude of the Church towards devil possession is an interesting one. It is often assumed[22] that the Church taught that all disease, particularly madness, was caused by sin, but in fact its attitude is much more complex than this, as is evident from the following quotation from Aelfric:

> "For divers causes are Christian men afflicted with disease, sometimes for their sins, sometimes for trial, sometimes for God's miracles, sometimes for preservation of good courses, that they may be the humbler; but in all these things patience is needful ... if the sinful be afflicted with disease for his unrighteousness, then if he with patience

---

20. V.P., 41
21. Life of Wulstan, op.cit., II, 4
22. e.g. by Bonser, p. 4-5

> praise His Lord and pray for his mercy, he shall be washed from his sins by that sickness, as a foul garment by soap. If he be righteous, he shall have greater honour through his sickness, if he be patient." 23

Later in the same homily he countenances the use of medicine, provided it be "true leechcraft" and not "devil's craft".

Mental disorders seem to be considered in much the same light. In some cases the origin is definitely stated to have been in misdeeds, as in the following examples. When Wilfrid was seeking restoration to his see, and in conflict with Oswiu, he was on one occasion thrown into prison. As a result of this injustice the wife of the reeve reponsible for guarding him was suddenly attacked by sickness:

> "All her limbs became nerveless, she was rigid, her body grew cold, her eyes closed, her mouth foamed, and she was just breathing from her breast the last breath of life in an unconscious condition ... /the reeve then went to Wilfrid, and confessed his sins and the king's wrongdoing, and persuaded him to help his wife/... /Wilfrid/ sprinkled her face with holy water, imploring the help of God in prayer; then, drop by drop, he bedewed her face until it was wet with the holy water. Then she opened her mouth, drew in long breaths, unclosed her eyes, recovered consciousness and understanding, and shortly afterwards her limbs became warm; she raised her head and moved her tongue to speak, and thanked God." 24

At the same time the queen was possessed by a devil and her limbs became contorted and rigid, but she too was healed when the king repented of his illtreatment of Wilfrid.[25] It seems most unfair that the wives should suffer for the sins of the husbands, but they were also cured by their repentance. The implication seems to be that God can use the devil for his own ends, and conversely, that the devil is unable to attack

---

23. Aelfric, Homilies ed. B. Thorpe (1843-6) I, 470f.
24. Eddius, Life of Wilfrid, 37

someone unless by the permission of Almighty God.

The cases of the two women are broadly similar, and it is curious that the first case is not regarded as devil possession, since the symptoms, rigidity of the limbs, unconsciousness, foaming at the mouth, seem at first sight to be the same. The description of the queen's condition is very brief, but "like Pilate's wife /she/ was so plagued and scourged that she scarcely expected to live till day. On the next day however, as soon as dawn appeared, the discreet abbess came to the queen and saw that her limbs were all contracted and tightly bound together and that she was manifestly dying". This suggests that she suffered convulsions of an epileptiform type, and epileptic fits are most common first thing in the morning. If this is so it may provide an explanation why only one of the two examples is described as devil possession, for frenzy and convulsions seem to be considered the main diagnostic features. The reeve's wife does not appear to have had convulsions, though she is mentioned as foaming at the mouth, and it is possible to see her condition as nothing more than a fainting fit.

Nonetheless, it is probably unwise to use the appearance of frenzy and convulsions as the chief means of diagnosing devil sickness, in spite of what has just been said. The majority of descriptions of diseases come from ecclesiastical sources (such as those cited above), whose authors were not usually medically qualified even in the Anglo-Saxon sense of the word. Their descriptions are therefore likely to suffer from inacuracies and confusions of terminology much as would a modern layman's, if asked to describe the symtoms of a disease. In the ecclesiastical context the attribution of the term "devil possession" to a particular form of illness may

have more relevance to the moral point being made by the author than to any carefully thought out medical distinction made between different types of mental disturbance.

The attribution of mental disorders to possession by a devil lends itself most readily to the idea that madness is the result of sin, evil causing evil, but this is not the only reason given by churchmen. The account of the madness of Hildmer's wife provides so many different attitudes and reactions, both lay and clerical that it is worth quoting in full.

> "There was a certain religious man, specially near to the man of God, named Hildmer, whose wife was much vexed by a devil. She was greatly ravaged and afflicted to the point of death, grinding her teeth and uttering tearful groans. Now the above-mentioned man, not doubting that she would die a cruel death, set out for our monastery and called St. Cuthbert to him ... and explained to him that his wife was sick almost to death. He did not reveal that she was afflicted with madness, for he was ashamed to declare that a woman, once so religious, was oppressed by a devil, neither knowing nor understanding that such a trial is wont to fall frequently upon Christians ... Then the man of God prepared himself, and they all rode together on horseback; his companion was weeping and mourning for two reasons, because his wife was dying and he was bereaved and his children left desolate, and more especially because of the disgraceful insane condition in which he knew that she was about to be seen by the man of God, whereby she was horribly degraded and shamelessly destroyed and polluted with spittle, she who had once been so modest and chaste ... [Cuthbert reveals that he knows of her illness and predicts the manner of her cure]. So they came to the homestead, ... [and] the woman, as if rising from sleep, came to meet them, and at the first touch of the reins the demon was completely driven away, and as she thankfully declared, she was restored to her former health and ministered to them." 26

---

26. V.A. II, 8

Bede's version of this story adds a few additional details.

> "When they were on the way, the man began to weep ... for he feared that when Cuthbert found her possessed of a devil, he would begin to think that she had served the Lord with a feigned and not a real faith. But the man of God consoled him with gentle words. 'Do not weep', he said, 'As though I were about to find your wife in such a condition as I should not wish. For I know myself, though you are ashamed to say it, that she is afflicted by a demon, ... for it is not only the wicked who are subjected to such torments, but sometimes also in this world, by the inscrutable judgement of God, the innocent are taken captive by the devil, not only in body, but also in mind'." 27

The author of the Anonymous Life states that possession by a devil is for a trial, temptatio, presumably of the faith of the person afflicted. This is paralleled by Aelfric's statement that men suffer disease "sometimes for trial".[28] Bede is less certain of the reason, and it is by the "inscrutable judgement of God", and William of Malmesbury says similarly it is "by the judgement of God, which is sometimes hidden, never unjust".[29] The emphases of these statements are threefold:

(1) The innocent as well as the guilty can suffer from madness.

(2) Possession by a devil is not therefore evidence of having sinned.

(3) The reason for madness being inflicted may be known only to God, but He never acts unjustly.

Hildmer's reactions are interesting. His understanding of the reasons for devil possession is that the victim must have sinned. In his wife's case he seems to feel that she must have denied her Christianity in some way and served God with a "feigned and not a real faith", as if madness must only

---

27. V.P., 15
28. Aelfric, Homilies, Vol. I, p. 470-73
29. Life of Wulstan, op.cit., II, 6

be inflicted on pagans. He is grieved and concerned and when he fears his wife is dying he goes to seek a priest to perform the last rites and requests of Cuthbert that she may be buried within the confines of the monastery at Lindisfarne; but he is horrified and ashamed as well, partly because he sees his wife's madness as punishment for some guilty act, but also because he does not wish Cuthbert to see her physical degradation, "shamelessly destroyed and polluted with spittle".

This mingled horror and concern is repeated over and over again in accounts of devil possession, and it comes not just from close relatives, but from neighbours and onlookers and those not personally involved. A young demoniac boy at Lindisfarne "cried and shouted and very many heard it with dread. And many despaired of finding any health-giving remedy for the wretched boy".[30] A "husbandman" at Cleeve "uttered frightful bellowings rather than cries, so that the mad noise brought fear even on those who were afar off, but "his kinsmen and neighbours especially pitied his misery".[31] In another case a young swordbearer of Wulstan's "lost his wits and eschewing the company of men fled into a wood hard by and abode there night and day". He was captured and bound by the local villagers, but escaped to the wood again. "The people were so affrighted that they dared not go near the place where they knew he was, either because he had done some hurt to one of them, or because it is natural to look with horror on a man who has lost the semblance of man".[32]

However, in spite of this horror, responsibility for these afflicted humans was accepted by the Church, the kinsmen, and to a lesser extent by the community.

---

30. V.A. iv, 15
31. Life of Wulstan, op.cit., II, 5
32. Ibid., II, 6

The Church provided healing, as discussed above, but also shelter. A man known to be an epileptic was received hospitably in Aethelhild's monastery and given supper and a bed. When he had a fit during the night the attendants and onlookers attempted to control his convulsions, presumably to prevent him hurting himself, but being unable to do so, the abbess was awakened and a priest called to pronounce exorcisms. These were unsuccessful but the man was eventually cured by the use of the healing dust from the washing of St. Oswald's bones.[33] This sympathetic attention and consideration, even in the middle of the night, is noteworthy and is in contrast to the treatment of Oswiu's queen at Coldingham, who was left to suffer all night and it was not till dawn that the abbess saw her parlous state. The monks at Lindisfarne also made valiant attempts to cure the demoniac boy who was brought to them, and showed considerable concern for his welfare.[34]

The responsibility for the welfare of the insane lay primarily with his family, who appear universally to have accepted this duty, often at great expense of money, time and sometimes even life. A young man who mimicked Bishop Wulstan's form of baptism became demented before the eyes of his audience. Seeing this as just vengeance for his blasphemy the crowd drove him away and he fell into a well or pit near the cemetery where the incident took place. He would have been left to die there but his kinsmen sought him out and having pulled him out with ropes, carried him to the inn, and cared for him till he died a few days later.[35]

---

33. H.E. iii, 11
34. V.A. iv, 15
35. Life of St. Wulstan, op.cit., II, 14

Another family, who cared for an insane relative with considerable self-sacrifice, had a son named Hwaetred, who suffered from a mad frenzy in which he attacked not only himself but everyone around him. On one occasion when a group of people had gathered in an attempt to control him "he seized a well filed, double winged axe and with deadly blows he felled 3 men to the ground and slew them". His parents looked after him for four years in this state until he was eventually cured by Guthlac.[36]

A more detailed account of the concern with which the insane were treated is given by William of Malmesbury:

> "There was a woman dwelling /near Evesham/, in a well plenished home: but an evil spirit had robbed her of her wits. At first it made her an idiot, then drove her to violent frenzy. And now she had come to that state of misery that she fled from the love of her parents and the care of her kindred, and wandered through desolate places or wherever the impulse of madness carried her. Her parents, who had been vexed before, thought this was not to be borne. They laid hands on her and bound her with fetters. Too harsh, one might say. But in truth their harshness was followed by pity, and the more wretched she became the more earnestly did they hunt for remedies. They hired physicians to heal the distemper by the art of physic. They brought priests to recall her mind by healing exorcism. Among them came the Prior of Evesham, who told and testified the truth of it to Coleman: but he like the others, went away disappointed. For although physicians and clerks did their utmost, they wasted their medicines and their exorcisms. And indeed her kinsfolk spent most of their substance and were left without hope or counsel. So they went back to the said prior, for they knew he was a good man and asked him what they should do. If he knew of any hope yet remaining, let him tell them and they would assuredly do it if it were not beyond their power. He thought it over and advised them to show her to Bishop Wulstan. He and they ought to have faith: for no sickness dared exist before him who rejoiced

---

36. Life of St. Guthlac, 14

> to submit himself to the commands of the Creator. The thing seemed good to them and they went to the Bishop, and easily obtained what they desired. For as soon as he beheld the woman he was grieved to the heart by her sufferings: her fearful calamity drew a groan from him: groaning he found a remedy. He stretched forth his hand and gave the woman his blessing. Straightaway, in a moment, the woman recovered her senses and was of sound mind: she knew her kinsmen; she blessed the bishop. He followed up the heavenly gift with words of wholesome counsel. Go in peace: Bless not Wulstan but God: love virtue, sin no more: keep innocency, lest a worse thing come unto thee. The seed of preaching could not but bear fruit when it was sown by so expert a husbandman. The woman put on the veil of a nun, and set the precepts of God above the world." 37

There are several interesting points about this passage, and the treatment of the girl. Her parents were at first only annoyed and vexed by her strange behaviour, but when she started wandering round the district they constrained her physically with chains, to prevent her journeyings. Had their concern merely been caused by their own personal inconvenience and the legal responsibilities they had for anyone of their own family this might have been enough, since the girl evidently was not aggressive; but it went much further than that. They spent all their money hiring doctors to try to cure her, and priests to perform exorcism, and as they were non inops substantia their efforts must have lasted some considerable time, indicative of the faith they seemed to have placed in finding a medical cure, as well as a spiritual one. But even having done all that seemed humanly possible, and reducing themselves to near penury, the parents still approached the prior for further help. He advised them

---

37. Life of St. Wulstan, op.cit., II, 4

to go to Wulfstan, who was immediately sympathetic to the woman's plight and was able to restore her to her sound mind.

In his little homily to her afterwards Wulfstan says "love virtue: sin no more", accepting the simple explanation that madness is a punishment for sin, or at least assuming that the girl and the parents will think this is so. In general, when it is possible to gain an impression of the views of the layman on this matter, this is always the attitude adopted, as in the case of Hildmer's wife,[38] and the boy who mimicked Wulfstan's baptism.[39] But in practice this does not seem to have meant that a mad person was made an outcast from society or was subject to ill-treatment, at this period anyway, except in so far as the violence of the madman sometimes provoked violence in his suppression. The obligation of the kin to care for their members is certainly far stronger than any horror or fear that they may have felt for the sick man, and their sympathy and desire to help goes much beyond this in most cases.

Wulfstan's sympathy is never in doubt. He is always grieved and distressed at the plight of anyone who is suffering, whether from insanity or any other disease, and he invariably treats them with kindness. William of Malmesbury too, is generally compassionate. "Too harsh", he says, when the parents of the girl put her in chains to prevent her wanderings, - an attitude that seems remarkably modern, - though in fact he seems to have no objections when people are bound in other instances.[40] In this particular case it may be the fact that the girl is not violent, or simply that she

---

38. V.P., 15
39. Life of St. Wulstan, op.cit., II, 14
40. e.g. Ibid., II, 5

is a woman which causes him to protest. But even today much of the treatment of the insane is limited to confining them within institutions and sedatives and drugs are sometimes merely a less visible form of constraint.

All the incidents which involve the "devil-sick" show that their treatment was almost invariably humane. Undoubtedly there must have been cases of ill-treatment, but they seem to be the exception rather than the rule. The compiler of a saint's life and miracles would presumably try to make the account of the particular ailment the saint cured completely typical, in order to give the story credibility, and had harsh treatment been commonplace it would surely have been mentioned in at least one of the dozen or so examples referred to previously. Moreover all these cases have a happy ending for everyone concerned, but there must have been many families who cared for their unfortunate relatives for the whole duration of their lives, without respite.

The same was true with mental defectives. At Breedon-on-the-Hill in Leicestershire the skull of a mongol child was found among the burials in the late Saxon cemetery.[41] The child was young, only nine or twelve years old, but it had evidently been cared for in the normal way and buried together with the rest of the community without distinction. The whole approach of Anglo-Saxon society to the mentally ill among it is like this, - to involve the sick members in the community and try to treat them from within it, rather than, as has been the pattern until now, to extrude them.

In all, there are twelve fairly detailed descriptions of mental disorders in the sources, nine involving men, and

---

41. Brothwell, D.R., "A possible case of mongolism in a Saxon population", Annals of Human Genetics 24 (1960) 141-9

three women. At least five cases involve young people, one only a boy[42] and other are described as invenis[43] or adolescens.[44] The rest are adults of indeterminate ages. The different cases fall into three main types:

(a) Violent frenzy and attacks both on oneself and on others, e.g. the boy at Lindisfarne[45] and the peasant at Cleeve;[46]

(b) Withdrawal from human company and running away, e.g. the girl living near Evesham,[47] and Wulfstan's swordbearer;[48]

(c) Epileptiform attacks with convulsions, contortions of the limbs and so on, e.g. the "fiend sick" man received by the Abbey,[49] and Hildmer's wife.[50]

It is interesting that these three types conform to the classical divisions of psychiatric illness, as expressed by Isidore,[51] namely mania, melancholia and epilepsy and discussed earlier in the chapter. In modern terms however, probably most of these cases would be described as suffering from psychoses, which include functional disorders such as manic depression and schizophrenia; and organic disorders caused, for example, by brain damage, and producing such symptoms as fits, unconsciousness, violence, confusion, visual hallucinations and so on. Thus people such as Ecga who "did not know what he was or where he dwelt or what he was about to do ... his powers of speech, discussion and understanding failed him entirely";[52] and the man at Cleeve who "tore in pieces with his hands or gnawed with his teeth everything he could reach; at what was beyond his reach he would grind

---

42. V.A., iv, 15
43. Felix, Life of Guthlac 41
44. Life of St. Wulstan, op.cit., II 5; 14
45. V.A., iv, 15
46. Life of St. Wulstan, op.cit., II, 5
47. Ibid., II, 4
48. Ibid., II, 6
49. H.E. iii, 11
50. V.A. II, 8

his teeth, cursing and spitting",[53] would both be described as schizophrenic, though in the divisions of classical medicine Ecga would be melancholic and the other manic.

There is some slight hint of these three divisions in the Anglo-Saxon medical texts, where epilepsy is distinguished from mania (wedenheorte), and ungymynde and dysgunge seem to indicate melancholic states. However, many of the remedies are merely for devil sickness in general and there can be no distinctions made in the kind of treatment given. Also included in this group of remedies are some for temptations of the devil, enchantment, heathen charms, and apparitions, all of which, like madness, are presumably seen as the work of the devil and his minions on Earth. The importance of devilcraft and witchcraft, and its hold on the Anglo-Saxon mind is indicated by the number of prohibitions in the penetentials and the laws, - the Grateley code of Athelstan for instance:

> "Concerning witchcraft. And we have pronounced concerning witchcraft and sorceries and murders, that if anyone is killed by such and he (who practised them) cannot deny it, he is to forfeit his life." 55

It is interesting that the results of witchcraft were regarded as a medical problem, rather than an ecclesiastical one. If the result was an illness of some kind this is not altogether surprising, but one would not necessarily expect the treatment of apparitions to fall within the medical province. It does suggest though, that by the second half of the Anglo-Saxon period some of the original pagan rituals were beginning

---

51. Isidore, Etymologies IV, 7 5-9
52. Life of Guthlac, 42 ut quid esset vel quo sederet vel quid parabat facere nesciret ... facultas vero loquendi, disputandi intelligendique penitus defuit
53. Life of Wulstan II, 5
54. Lbk. II, i; Lbk. III i, lxi
55. II Aethelstan 6

to be regarded as magic and superstition, which did not involve a definite anti-religious element per se.

There are not a large number of remedies for mental disorders in the Old English medical texts. The Lacnunga and the Peri Didaxeon have none, and the Sextus Placitus text, the Medicina de Quadrupedibus has six. These form a distinct group since they use different parts of animals rather than herbs as remedies. In general the remedies are simple and straightforward if somewhat unappetising. Two involve the eating of wolf's[56] and lion's[57] flesh, probably designed to give the courage and cunning of these animals to the patient, to help him face the apparitions troubling him.

Of the other texts the pseudo-Apuleius has eleven remedies, Leechbooks I and II twelve, and Leechbook III thirteen. Though all three use herbs there is a marked split between the first text and the other two, both in the herbs used and in the whole style of treatment. The eleven remedies of the pseudo-Apuleius use eleven different single herbs, (none of which are used in the Leechbooks), and have a considerable magical element. For instance a remedy wið monoð seoce says:

> "take /c̄lufwyrt/ and wreathe it with a red thread about the man's swere (neck) when the moon is on the wane, in the month which is called April, and in the early part of October." 58

Another involves eating the berries of asterion when the moon is on the wane and the sun in Virgo,[59] and others prescribe that the herb should be bound round the man's neck,[60] or merely laid over him.[61] Several of the herbs prescribed are

---

56. M de Q, ix, i
57. Ibid., x, 1
58. ps.A. x 2
59. Ibid., lxi, 3
60. Ibid., lviii, 2; lxi, 3
61. Ibid., lxvi, 2

unidentified,[62] or are Mediterrranean plants known not to be in England at this period,[63] and it seems unlikely that these remedies were used at all frequently.

In contrast the two Leechbooks form a unified herbal tradition which uses multiple herbs rather than single ones, and with a consistent use of the same group. The twenty remedies which prescribe herbs rather than other means of cure use 60 different herbs 150 times, an average of 7 or 8 herbs per remedy, - though the longest remedy in fact uses fourteen herbs.[64] Thirty herbs are mentioned only once, but of the other thirty a group of five is predominant, consisting of lupin, bishopwort, cropleek, corn cockle and betony. Bishopwort is given as a synonym for betony in the ps. Apuleius text,[65] but in three of the twelve remedies in which it is prescribed here betony also appears.[66] The reason may be careless copying, but it is possible that a different herb is meant.[67] However, for the sake of argument they are assumed to be one and the same in this particular case. These four herbs then make up one third of the total usage, and form the following pattern. Lupin is used in every remedy except one,[68] and there are only two occasions when lupin appears without bishopwort/betony,[69] and only one when bishopwort occurs without lupin.[70] When cropleek is used it is always in association with lupin and bishopwort (with one exception),[71] but mutually exclusive of cockle, again with one exception.[72] Thus the basis of all these remedies

---

62. polion. Ibid., lviii 2; asterion, lxi 3; conyza, cxlii 1
63. paeony, lxvi 2
64. Lbk. III lxi
65. ps.A. i
66. Lbk. I lxvi; Lbk. III xli; Ibid., lxiv, b
67. See chapter 4
68. Lbk. III lxvii
69. Lbk. I lxiv, b; Lbk. III lxvii, b
70. Lbk. III lxvii
71. Lbk. III lxvii, b

consists of lupin, bishopwort and a third herb, either cockle or cropleek, with the further addition of other herbs chosen by the individual compilers of the remedies.

Since madness is seen as possession by a devil the purpose of the remedy is to drive the devil from the body, usually by means of a purgative drink. There is also a strong religious element, - most of the remedies include holy water and the saying of masses, generally nine or twelve, or of litanies and pater nosters.[73] One remedy prescribes that the drink be drunk from a church bell, and that afterwards the priest is to sing over the patient Domine, sancte pater omnipotens.[74] The power of the Church is added to the power of the herbs in an attempt to combat the devil sickness, since by its very nature the disease is not susceptible to treatment by Orthodox means.

There are some magical remedies in the Leechbooks (2/12 in Leechbook I and 2/13 in Leechbook III), but they are all magic used aginst magic. One is just a simple charm:

> "Against every evil rune lay and one full of elvish tricks, write this writing in Greek letters alpha, omega IESUM (?) BERONIKH." 75

Another, prescribed against fiends temptations, night visitors, nightmare, knot, fascination and evil enchantments by song, involved taking three stones from the maw of young swallows and binding them on the patient, and is derived from Marcellus Empiricus.[76]

A different remedy, wiþ þon þe mon sie monaðe seoc counsels

---

72. Lbk. III lxi
73. Lbk. I lxiii, a-d, lxiv; Lbk. III xli, lxi, lxiv
74. Lbk. I lxiii, b
75. Lbk. I lxiv, 1
76. Lbk. III, i

beating the patient with a whip made from a porpoise skin: "soon he will be well" it ends.[77] This is the only occasion in the Anglo-Saxon texts when beating is advised as a remedy for madness, though sometimes violence was used in order to restrain the patient. Bonser refers to a thirteenth century window in Canterbury Cathedral which shows a madman being beaten at the tomb of St. Thomas,[78] and the thirteenth century Miracles of St. Wulfstan relate the case of a mad woman who received the same treatment at Wulfstan's shrine,[79] and a mad potter who had a rod placed beside him so that passersby might scourge him.[80] These late references cannot, however, be used to indicate the customs of the Saxon period, but imply rather that attitudes towards the insane hardened after the Norman Conquest, for all the contemporary references to the earlier period suggest that the treatment of the mentally ill was generally humane.

Indeed this humanity and concern are the most striking points to emerge out of this survey of mental disorders, since these are attitudes which one might expect to be of more modern origin. Though the medical treatment of these disorders cannot have helped to relieve the distress in many cases, it does at least indicate that they were regarded as curable diseases worthy of treatment, and the responsibility accepted by the kin, meant that the insane received a degree of care, if not cure, which is sometimes very impressive.

---

77. Lbk. III, xl
78. Bonser, p. 259
79. I, 13
80. I, 15

CHAPTER 7: EPIDEMICS

Major epidemics, fevers and famines seem to have been regular occurrences in the Saxon period, and are frequently referred to in the documentary sources. These references have been collected and discussed in some detail by Bonser, and it is not proposed to duplicate his work. The present chapter looks instead at the problem of the identification of the various epidemic diseases described in the sources, and reviews some new evidence for the existence of bubonic plague in Anglo-Saxon England.

The outbreaks of disease described in the sources were sometimes only of minor importance, and confined maybe to a couple of villages or a single monastery; but at other times they raged unchecked over large parts of the country. With hygiene generally deficient, food inadequate in times of scarcity, and the population living in close proximity with each other, and often with their animals, any disease spread rapidly, and once started took some time to burn itself out. The monasteries were particularly susceptible to epidemics, both because they consisted of large groups of people living together and sleeping in common dormitories, and because their traditions demanded not only that they took in the sick to care for them in the monastery, but also that they went out to visit the sick elsewhere. Such charity must often have resulted in the introduction of the infection among the monastic community itself.

With no real knowledge of the causes of disease, and no means of checking its course, these plagues were frightening and bewildering to the Saxons. Their apparent virulence and high mortality made them more than a medical problem, and it

is interesting that there are no references to doctors in accounts of the plague, and few remedies for fevers or mentions of epidemics in the Leechbooks. A disaster of such magnitude was seen as "a blow sent by God the Creator",[1] and the remedies sought were usually religious ones. Thus Edgar in the tenth century:

> "Here it is made known in this document how King Edgar inquired what could be a remedy in the sudden pestilence which greatly oppressed and reduced his people far and wide throughout his dominion.
> 1. Firstly, namely, that it seemed to him and his councillors that a calamity of this kind was merited by sins and by contempt of God's commands, and especially by the withholding of the tribute which Christian men ought to render to God in their tithes ...
> 1.4 Therefore I and the archbishop command that you do not anger God, nor merit either sudden death in this present life, or indeed the future death in everlasting Hell by any withholding of God's dues; but both poor man and rich, who has any produce, is to render his tithes to God with all gladness and with all willingness, as the ordinance directs which my councillors decreed at Andover." 2

In an earlier period people sometimes reacted by rejecting their Christian faith altogether and returning to the old gods, as did the villagers near Melrose when Cuthbert was prior,[3] or as did Sigehere, King of the East Saxons:

> "When this kingdom was suffering from the disastrous plague [of 664] ..., Sigehere, together with his part of the nation, deserted the sacraments of the Christian faith and apostatized. For the King himself and the majority of both nobles and commons loved this present life, seeking no other and not even believing in any future existence; so they began to restore the derelict temples and to worship images, as if they could protect themselves by such means from the plague." 4

---

1. V.P., 9
2. IV Edgar, 962 x 963 in D. Whitelock ed., English Historical Documents (1955) Vol. 1, p. 398
3. V.P., 9
4. H.E. iii, 30

The general sense of helplessness engendered by an outbreak of plague is perhaps best illustrated by the action of Aethelburh, Abbess of Barking. When the plague struck the male half of the monastery the most sensible thing she could think of to do was to ask the sisters where they would like to be buried when the plague reached their half of the monastery.[5] The prevailing attitude was one of fatalism, or perhaps stoicism, and though the Church in general did not shirk its responsibilities, and people like Cuthbert in particular travelled round his diocese "bringing the help of much-needed consolation"[6] in times of plague, there was really very little that could be done in such situations.

The descriptions of the epidemics provide few clues to help identify the possible diseases which caused them. Bede usually uses the word plaga or pestilentia to describe an epidemic, and the symptoms of the sufferers are rarely given. In most cases all that can be deduced is that the disease had a high mortality rate and ran a rapid course. However, this has not prevented much argument and discussion, and various attempts at identification have been made, based mainly on descriptions in the Irish Annals, which give different names to the pestilences.

Shrewsbury has suggested that all the outbreaks were of smallpox, in various stages of acclimatisation:

> "When a transmissible disease is introduced to a virgin population, it erupts with a violence and a malignity that are extraordinary and its clinical picture may be different from the one that it exhibits after it has settled down as an endemic disease. The evolution of the host-parasite relationship is accompanied by alterations in the manifestations of the disease, but the evolutionary trend is always toward a relatively

---

5. H.E. iv, 7
6. V.P., 33

> stable relationship, with a relatively constant clinical picture, because the death of the host usually entails the death also of the parasite, and the extermination of the host species is a biological disaster for the parasite ... At its next eruption it may not be quite so deadly because there has already been one contact and therefore a beginning of adaptation between host and parasite ... with each successive outbreak however, an increasing tolerance develops between host and parasite ... In ancient times it is practically certain that during this process of adaption, the different stages marked by successive outbreaks would be given different names." [7]

McArthur disagrees with this, and of the Irish names given to the various epidemics he identifies only bolgagh with smallpox. Of the other terms used he suggests blefed is bubonic plague, and that the buidhe chonaill, or yellow pestilence, is relapsing fever, a disease often associated with famine, and in which jaundice is often a predominating sign.[8]

Shrewsbury's reluctance to accept that bubonic plague was present in pre-Conquest England was based on the fact that at the time there was no unequivocal evidence for the existence of rats in England of that period, and without rats there was unlikely to have been any plague. However, in recent excavations at York, the skeleton of a black rat has been found in the filling of a well. Since the rat was towards the bottom of the fill it is unlikely to have burrowed in subsequently, and it is probably contemporary with the rest of the infill which dates from the late fourth century AD.[9]

The presence of a rat in the late Roman period does not of

---

7. J.F.D. Shrewsbury, 'The Yellow Plague', J. Hist. Med. 4 (1949) 25-26
8. W.P. McArthur "The identification of some pestilences recorded in the Irish annals" Irish Historical Studies 6 (1949) 169-188
9. J. Rackham "Rattus rattus (Linaeus 1758): some recent finds suggesting a Roman date for the introduction of the black rat into Britain" (forthcoming article)

course prove that bubonic plague existed amongst the Anglo-Saxons, - the rats have first to be of sufficient numbers to sustain an epizootic among themselves and secondly they have to be infected by the plague bacillus. But in association with other evidence about the epidemics the existence of bubonic plague does now seem a more likely possibility.

Bubonic plague is caused by the bacillus pasteurella pestis, which infects small rodents, particularly rats, and is usually spread to man by the intermediary of a flea. The rat flea, xenopsylla cheopis, feeds on an infected rat and absorbs the bacterium into its stomach, where it multiplies rapidly until it fills it. No blood can then enter the stomach so the flea becomes ravenously hungry and will attack anything within reach,whether human or animal. Such "blocked" fleas, as they are known, are probably capable of transmitting the plague for up to fourteen days, though separated from their host. If a number of "blocked" fleas are accidently transported in merchandise; for example, grain or animal fodder, to an uninfected area, the following sequence of events is likely to occur: a few cases of human disease will rapidly appear, since the fleas are starved and will attack the carriers of the goods; there will then be an interval of perhaps two weeks when there are no further human cases, because the fleas have infected their natural hosts, the rats; this is followed by an epizootic of rat-plague, an increase in the number of blocked fleas, and a decline in the number of rats; thus forcing the fleas to seek new hosts and transmitting the disease to humans in its epidemic form. In humans the disease is characterised by buboes, which are hard swellings of the lymphatic gland, most commonly found in the groin, but also in the armpits and neck.

The progress of the disease is very rapid and very painful, - death can occur in a few hours, but usually within a week, and in the first weeks of an epidemic the case mortality is often 90%, and must rarely have fallen below 60% before the use of mdern antibiotics.[10]

The first great pandemic of plague which is generally accepted as being bubonic appeared in western Europe during the reign of Justinian, and lasted for about fifty years (c.540-c.590). Gregory of Tours records its arrival in France during the episcopacy of St. Gall,[11] and mentions several visitations. Lyons, Bourges, Chalon and Dijon, were all affected, as well as Arles and Marseilles which suffered on numerous occasions.[12] Gregory notes that "there appeared in the groin or armpit a wound like that from a snakebite, and those who had it were so swiftly destroyed by the poison, that on the second or third day they breathed their last."[13] He also gives a more detailed account of the appearance of plague at Marseilles in 588 AD:

> "A ship had put into port with the usual merchandise from Spain, unhappily bringing the tinder which kindled this disease. Many citizens purchased various objects from the cargo, and soon a house inhabited by eight people was left empty, every one of them being carried off by the contagion. The fire of this plague did not spread immediately through all the houses in the place; but there was a certain interval, and then the whole city blazed with the pest, like a cornfield set aflame." 14

This description follows closely the outline given above for the first stages of a plague epidemic: firstly, the limited outbreak among humans, followed by a gap while the rats are infected, followed by the major human epidemic.

---

10. For the above notes see J.F.D. Shrewsbury, A History of Bubonic Plague in the British Isles (1970) p. 1-3
11. Gregory of Tours, History of the Franks trans. O.M. Dalton (1927) iv, 5
12. Ibid., iv, 24; vi, 15; ix, 22
13. Ibid., iv, 24

There is thus little room for doubt that the disease Gregory refers to is bubonic plague.

If bubonic plague was prevalent in Marseilles and the surrounding region, it is possible that from this source it could have reached England. During the sixth and seventh centuries the main route from England to Rome seems to have been via Marseilles and the south of France, and ecclesiastical contacts with this area were close. When Augustine and his companions were sent to England they travelled via Arles and Lyons, and Gregory the Great sent letters to the bishops of Marseilles and Tours also, asking them to receive the mission kindly.[15] Benedict Biscop and Wilfrid visited Lyons, and presumably Marseilles, on their first visit to Rome,[16] and Benedict Biscop seems to have used that route regularly on his trips to Rome, since he also had friends at Vienne where he left his collections of books and other treasures which he had amassed for the monasteries at Monkwearmouth and Jarrow.[17] Theodore and Hadrian too, in Benedict Biscop's company sailed from Rome to Marseilles in 668, and then travelled overland to Arles, Sens, Meaux and Paris, eventually crossing from Quentovic to the Kentish coast.[18] Finally, Lérins, a monastery off the coast of Cannes, was an influential centre in the monastic movement, and English and Irish pilgrims who visited there presumably reached it via the same route through the South of France.

Whatever the origins of the disease, England suffered from several waves of pestilence in the second half of the seventh century, most of which are recorded by Bede. In

---

14. Ibid., ix, 22
15. H.E. i, 24 and note 2
16. Life of Wilfrid, c 3
17. H.A.B., 4
18. H.E. iv, 1

661 or 662 the monastery at Melrose was attacked by plague during the time Cuthbert was there, and Cuthbert himself contracted the disease. The other monks spent the whole night praying for his safety, and on telling him of this the next morning Cuthbert replied:

> "'And why do I lie here? For doubtless God has not despised the prayers of so many good men. Give me my staff and shoes'. And immediately he arose and began to try to walk, leaning upon his staff; and as his strength grew from day to day, he recovered his health; but as the swelling which appeared in his thigh gradually left the surface of his body, it sank into the inward parts and, throughout almost the whole of his life, he continued to feel some inward pains ..." 19

Boisil the prior also caught the disease and died after an illness which lasted seven days. The description of the swelling in Cuthbert's thigh is strongly suggestive of a plague bubo, and the fact that Boisil died within a week, also implies that bubonic plague may have been the causative disease.

A more serious and widespread outbreak occurred in 664, preceded by a warning eclipse of the sun.

> "In the same year a sudden pestilence first depopulated the southern parts of Britain and afterwards attacked the kingdom of Northumbria, raging far and wide with cruel devastation and laying low a vast number of people. Bishop Tuda /of Lindisfarne/ was carried off by it and honourably buried in the monastery called Paegnalaech. The plague did equal destruction in Ireland." 20

In Kent King Eorconberht and Archbishop Deusdedit both died of the plague on the 14th July,[21] and according to the Annals of Ulster the plague reached Ireland on 1st August. By the autumn it had reached Northumbria, since Bishop Cedd died at Lastingham on 28th October.[22] The monks from his monastery at Bradwell-on-Sea travelled north to live near his

---

19. V.P., 8
20. H.E. iii, 27
21. H.E. iv, 1
22. H.E. iii, 23

body, but were afflicted by another attack of the plague, and all thirty, with the exception of one small boy, died at Lastingham. During the year the East Saxons apostatised, presumably after the death of Cedd and the departure of his monks, since Jaruman, bishop of Mercia was sent to reconvert them. This would imply that the East Saxon kingdom was also suffering from the plague during the autumn.

After this extensive outbreak in 664 there appears to have been a lull, apart from a possibly isolated outbreak at Lichfield in 672,[23] until the 680's when there were several recurrences. In 681 or 2 "many of the kingdoms of Britain were attacked by a virulent plague", Sussex being particularly affected, and many of those newly converted by Wilfrid were carried off from his monastery at Selsey.[24] This may also be the same outbreak which Cuthbert refers to when he tells the story of the monks from Lindisfarne who came to visit him one Christmastime while he was living alone on the Farnes. He was ill at ease during their visit and warned them to guard against temptation:

> "But when they left me in the morning and went back to their monastery, that is Lindisfarne, they found that one of their number had died of the pestilence; and as it grew and became worse from day to day, yea and from month to month, and almost throughout the whole year, nearly the whole of that renowned congregation of spiritual fathers and brethren departed to be with the Lord in that pestilence." 25

Northumbria seems to have been hit particularly hard at this time, for Bede records that in 686:

> "there suddenly arose in those parts a most grievous pestilence, and brought with it destruction so severe that in some large villages and estates once crowded with inhabitants only a small and scattered remnant and sometimes none at all remained." 26

---

23. H.E. iv, 3
24. H.E. iv, 14

The plague also reached Monkwearmouth and Jarrow,

> "And in it were snatched to the Lord many men from each of /Benedict Biscop's/ monasteries, including the abbot, venerable and beloved of God, Eosterwine himself ... Further, in the monastery over which Ceolfrith presided /Jarrow/, all who could read or preach or say the antiphons and responses, were carried off, except the abbot himself and one little boy." 27

The high mortality of these epidemics is notable. At the time Jarrow was founded Ceolfrith took twenty-two monks with him to help build the monastery,[28] and by 686 the numbers were presumably much larger. At Lastingham 29 of the 30 monks who went to join Cedd died of the plague,[29] and the mortality at Lindisfarne can perhaps be compared with Eyam in Derbyshire where out of a population of 350, all but 30 had died of the plague at the end of a year. Boisil, Chad and Eosterwine, whose deaths from the plague are recorded in some detail, all died after seven days,[30] and the rapidity of their deaths combined with the general high mortality are both suggestive of bubonic plague.

The fact that the monasteries were so badly affected should come as no surprise, since not only were they relatively large centres of population, they also presumably held large stores of grain which would attract the black rats. Moreover, grain, fodder and other foodstuffs would have been brought to the monasteries from the surrounding area in payment of tithes, and these, together with hides and woollen goods, which the community also required, were the most favoured goods for the dissemination of infected fleas and rats.[31] It was

---

25. V.P., 27
26. Ibid., 33
27. H.A.A. 13, 14
28. H.A.A. 11
29. H.E. iii, 23
30. V.P., 8; H.E. iv, 3; H.A.B., 8
31. Shrewsbury, op.cit., p. 29

through trade, or at least the transportation of goods that the plague must have spread from one area to another, since it is very rare for it to pass directly from one human to another except in its pneumonic form.

The absence of any reference to rats in the literature is not in itself significant (provided it is accepted that black rats were present in England during the Anglo-Saxon period), since they are not obtrusive animals, and even when dying in considerable numbers during an epizootic of rat plague their dead bodies are not particularly obvious. According to Hirst:

> "Evidence of rat mortality is by no means always conspicuous even when the epizootic is severe. Few rats may be found dead or dying in the open, but many if looked for in the right situation. Thus in Ceylon or India numerous carcases may be dug up from complex burrow systems or taken in a mummified condition from the interstices of roof-tiles, or in Java from the hollows of bamboos." 32

In England the rats probably lived amongst the thatch or turfs which covered the roofs of the peasant houses, or burrowed into the wattle and daub of the wall, or under the beaten earth floors. They were thus in close contact with the human occupants of the houses, without necessarily being very visible. In the monasteries such as Monkwearmouth and Jarrow, which were largely stone built, the rats would have had less free access to the living quarters, except perhaps via the roof, and must have been limited to the granaries, storehouses and workshops, which were probably of timber. In an archaeological context, it should be possible to find the rat skeletons in the excavation of such settlements, and it is curious that so few physical remains have been found. Part of the reason may be that in the past the animal

---

32. L.F. Hirst, British Encyclopedia of Medical Practice ix, (1936) 678-9

bones from archaeological sites have not been preserved or examined as carefully as they should be, but this does not entirely solve the problem. If rats were present and in sufficient numbers to cause epidemics of plague amongst the human population there should be better evidence for their existence.

Another argument against the presence of bubonic plague in pre-Conquest England is that the population was not sufficiently large to maintain an epidemic. Shrewsbury has suggested that a population of 4 million people would not have been enough to sustain a nationwide outbreak of bubonic plague in 1348,[33] and Russell had estimated that the population of England was only 500,000 in 650 AD, and no more than 2 million at the beginning of the eleventh century.[34] Such figures obviously would not be adequate to maintain anything other than small local epidemics, but Russell's estimates are really little more than informed guesswork and may be subject to wide variations. The evidence there is indicates that the population may have been greater than he suggests but by how much it is impossible to say. Postan has pointed out that during the Anglo-Saxon period there was steady expansion of settlement, until by the time of Domesday there were in general as many settled places as at the end of the eighteenth century, and mostly on the same sites and with the same names. Moreover, the aggregate acreage represented by the Domesday ploughlands was at least as great and in some Midland counties greater than the areas under plough during the period of high farming in the nineteenth century. By 1086 the Anglo-Saxons had fully occupied the lands of first preference, most of the

---

33. Shrewsbury, op.cit., p. 23-24

second rate land, and in some cases land of third choice too.[35] It is difficult to understand this great extension in the area of settlement if the population during the period was only increasing from half a million to two million, particularly if the number of settlements was the same as at the end of the eighteenth century where the population was nearer 10 million.[36] Moreover, a general reading of the original sources does not give the impression that the countryside was thinly populated and the villages very isolated. When the plague struck Northumbria in 686 mortality was so high that "in some large villages and estates once crowded with inhabitants, only a small and scattered remnant, and sometimes none at all, remained".[37] When Ceolfrith departed for Rome in 716 he left about 600 monks behind at Monkwearmouth and Jarrow,[38] while Wilfrid had "many thousands" of monks in his monasteries.[39] No doubt villages tended to be grouped together and there must have been areas of the country which were virtually uninhabited, but even in Cuthbert's diocese of Lindisfarne, which included Melrose to the West and went as far South as Carlisle, there seem to have been many settlements. True, they are sometimes described as "widely scattered villages"[40] or they were "far away on steep and rugged mountains",[41] but what is more interesting is that there should have been villages there at all, since even today the Cheviots are hardly the most populous area of the country.

---

34. J.C. Russell, "Population in Europe, 500-1500AD" p. 36 in C.M. Cipolla, The Fontana Economic History of Europe: the Middle Ages, (1972)
35. M.M. Postan, The Medieval Economy and Society (1972) p. 16-18
36. E.A. Wrigley, Population and History (1969), p. 185
37. V.P., 33
38. H.A.B., 17
39. Life of Wilfrid, 25
40. V.P., 32
41. Ibid., 9

Nor were these villages completely cut off from one another. When Cuthbert went up into the mountains the villagers all gathered together to hear him, and he "preached the word for two days to the crowds who flocked to hear him".[42]

The extent of Cuthbert's travels round his diocese is worth noting since it sometimes seems to be assumed that communications between areas were very difficult and travel virtually non-existent in the Saxon period. During the year and a half during which Cuthbert was bishop (Easter 685 - December 686), he made three visits to Carlisle,[43] a round trip of 150 miles or more, depending on his route; a visit to Melrose, and other settlements along the Tweed;[44] visits to unidentified places such as Bedesfeld, Medilwong and Kintis,[45] and to numerous other places in the area. When he decided to give up the bishopric and return to the Farnes "first he wished not only to go round his own diocese, but to visit the other dwellings of the faithful in the neighbourhood ... [and] having passed through the upper districts in turn he came to the monastery of virgins which ... is situated not far from the mouth of the river Tyne."[46] From the monastery at South Shields Cuthbert would presumably return to Lindisfarne via the coast. The impression Bede gives is one of almost ceaseless travelling around the area.

Wilfrid too, seems to have been equally energetic during the time he was in the country, though his journeyings are less well-documented. He held monasteries at Hexham and Ripon, sixty miles apart, and others in Mercia, over which he had jurisdiction. At the end of his life he set off to visit

---

42. Ibid., 32
43. V.A. iv, 5; V.P. 27 and 28
44. V.P. 25
45. V.A. iv, 4; iv, 6; iv, 3
46. V.P. 34, 35

all his properties in Mercia and distribute his possessions, and died at Oundle, 200 miles from his see in Hexham.[47] He obviously saw nothing unusual in holding lands and monasteries over such a wide area, and the distance between them seems to have been no barrier to regular communication.

Intercourse between the various monasteries and religious houses thus seems to have been frequent, and goods and traders presumably travelled the same routes, perhaps bringing the plague with them. During times of plague there seems to have been no attempt to isolate infected areas, and Cuthbert regularly visited plague-stricken villages.[48] Chad was sent to Canterbury to be consecrated bishop at the time the plague was raging there. When he arrived he found the archbishop was dead, and so travelled instead to the West Saxons.[49] Jaruman of Mercia visited the East Saxon kingdom during the plague in order to reconvert them from their apostasy,[50] and Cedd's monks from Bradwell-On-Sea travelled to Lastingham where Cedd had died of plague, and died there themselves.[51] There were thus plenty of opportunities for the plague to spread.

Whether the plagues of the seventh century were in fact bubonic plague is a question that is difficult to resolve, even after reviewing all the evidence. In favour of bubonic plague being present is the description of Cuthbert's illness and the swelling in his thigh, which sounds very like a plague bubo; the rapidity with which people died, having once caught the disease; and the high mortality rate. Against the presence of plague is the problem of the existence of the black rat;

---

47. Life of Wilfrid, 65
48. V.P. 33
49. H.E. iii, 28
50. H.E. iii, 30
51. H.E. iii, 23

the size of the human population, and the ease of communication between settled areas. The question of population seems to be resolved as far as Northumbria is concerned, as the density of settlement would probably be sufficient to sustain a local epidemic of plague and contacts were sufficiently close for it to spread. It may be that when Bede refers to the plague of 664 as depopulating the southern kingdoms of Britain before spreading to the north,[52] he is in fact describing two localised epidemics rather than a national one; one being an epidemic affecting Kent and Essex, and the other one affecting Northumbria; it being spread between the two areas because of the close communications between them, without infecting the rest of the country as a whole. The mortality of the plague, together with the recurrences in Northumbria later in the century, probably reduced the population below the level at which it could sustain even a local epidemic, and the plague gradually died out. This would explain why the plagues of the eighth century and later do not appear to be of the bubonic type.

The chief problem remains the existence of the black rat. Though the presence of rats in York in the late Roman period makes it more likely that rats and therefore bubonic plague were present in Anglo-Saxon England, until black rats have been identified from Anglo-Saxon settlement sites the presence of bubonic plague must remain only a possibility and cannot be confirmed.

After the close of Bede's Ecclesiastical History the descriptions of epidemics become much less detailed and are confined mainly to references in the Anglo-Saxon chronicle.

---

52. H.E. iii,27

These references have been catalogued by Bonser,[53] so it is not proposed to discuss them again here except to make a few general points.

The eighth century seems to have been largely free from epidemics, except for one outbreak in Northumbria in 760:

> "In /Æthelwold's/ second year a great pestilence occurred and continued for nearly two years. The people were wasted by various kinds of malignant diseases, but especially dysentery." [54]

Dysentery seems to have been one of the major diseases of the Anglo-Saxon period, though not always reaching epidemic status. Eata, abbot of Melrose, died of dysentery,[55] and Cuthbert cured a monk, Walhstod, of the disease, shortly before his own death.[56] The second Leechbook provides several descriptions of dysentery, its symptoms and its courses, and prescribes salves, poultices, baths, bloodletting and diet among the remedies.[57] It may have been the same disease which afflicted the Danish army besieging Kent in 1011, for Simeon of Durham records that two thousand of them were destroyed by dreadful pains of the intestines (per diros internorum cruciatus).[58]

The attacks of the Danes in the ninth century caused the disruption of the agricultural routine in many places, and the destruction or failure of crops meant severe food shortages. The plagues of the later Anglo-Saxon period were thus usually famine fevers, of which dysentery is one, but also relapsing fever and probably typhus.[59] The Anglo-Saxon chronicle of

---

53. Bonser, p. 51-97
54. Continuation to Bede, in B. Colgrave and R.A.B. Mynors ed. Bede's Ecclesiastical History of the English People (Oxford, 1969)
55. V.P. 8
56. V.A. iv, 12
57. Lbk. II xxxi, xxxii, lvi
58. Simeon of Durham, Historia Regum ed. T. Arnold (1885)
59. W. McArthur "The identification of some pestilences recorded in the Irish annals", Irish Hist. Studies 6 (1949) p. 181

893-6 records:

> "The host, by the mercy of God, had not altogether crushed the English people; but they were much more severely crushed during those three years by murrain, and plague; most of all by the fact that many of the best of the king's servants in the land passed away during those three years." 60

The most serious famines seem to have occurred in the first half of the eleventh century. The Chronicle records great famines, severe weather, failure of crops, death of cattle and so on, in the years 1005, 1042, 1044, 1047 and 1048. The effects of such famines can be seen in Simeon of Durham's rather overdramatised picture of the condition of Northumbria after the harrying of the North:

> "In consequence of the Normans having plundered England ... yet principally Northumbria and the adjacent provinces, so great a famine prevailed that men, compelled by hunger, devoured human flesh, that of horses, dogs and cats and whatever custom abhors, others sold themselves to perpetual slavery so they might in any way preserve their wretched existence; others while about to go into exile from their country, fell down in the middle of their journey and gave up the ghost. It was horrific to behold human corpses decaying in the houses, the streets and the roads, swarming with worms, while they were consuming in corruption with an abominable stench. For no one was left to bury them in the earth, all being cut off either by the sword or by famine or having left the country on account of the famine. Meanwhile the land being deprived of anyone to cultivate it, for 8 years an extensive solitude prevailed all around. There was no village inhabited between York and Durham; they became lurking places to wild beasts and robbers and were a great dread to travellers." 61

Such extensive depopulation would have been rare, but famine and epidemics must regularly have pruned back the population. Like every society, the Anglo-Saxons faced a continuous progression of diseases, both endemic and

---

60. The Anglo-Saxon Chronicle (1954) ed. G.N. Garmonsway
61. Simeon of Durham, Historia Regum in J. Stevenson, trans. Church Historians of England Vol. III pt. 2 (1855) p. 551

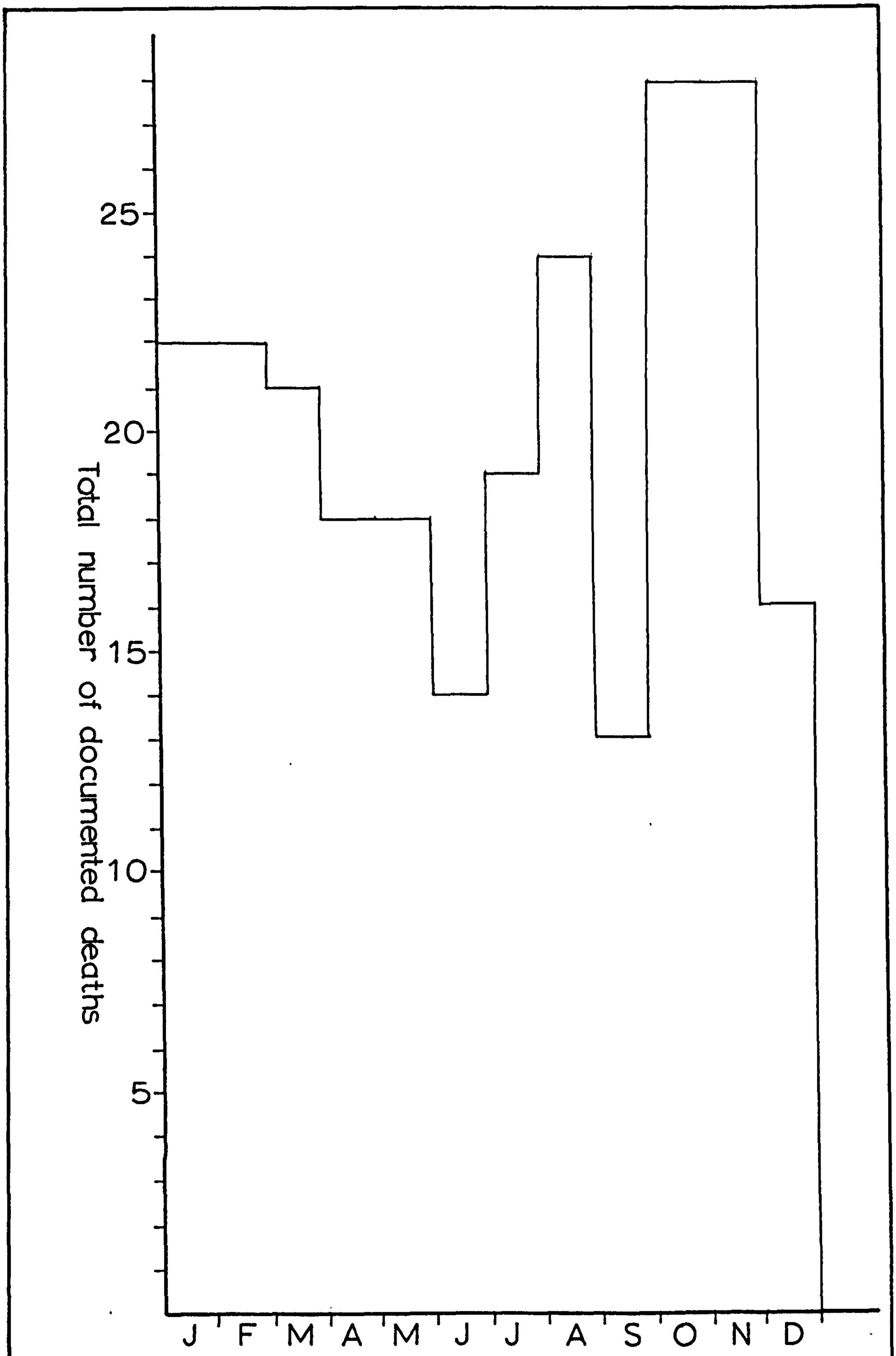


Fig:7.1 Graph showing the monthly fluctuations in death rates throughout the year, in the Anglo-Saxon period.

epidemic, which changed with the seasons. Some idea of the pattern of mortality this caused can be gained by gathering together the dates of death for various people recorded by authors such as Bede, or occuring in monastic calendars, chronicles and other sources. Two hundred and forty-three Anglo-Saxons are charted in the graph, and produce the following pattern. As can be seen there are three peaks in the graph, the first one coming in January and February, followed by a decline in mortality until early summer. The second peak occurs in July and August, and the third, and highest, in October and November.

The July and August peak represents plague deaths, mostly bubonic plague of the seventh century, since the sample inevitably draws heavily on Bede. The January-February peak represents deaths from infections of the respiratory tract, such as bronchitis, pneumonia and influenza, and possibly diseases such as smallpox or typhus. The Leechbooks refer to a fever known as lenctenadl, or lent disease[62] which is identified by Cockayne as typhus fever, on no very certain grounds. McArthur has suggested that malaria is the disease meant instead, since the fever seems to be intermittent.[63] Whatever the infection, it was obviously prevalent in the early spring.

The peak in October-November was probably due to mortality from dysenteric infections, and perhaps also measles and diptheria,[64] though there is some doubt about how widespread these diseases were in the Anglo-Saxon period.[65]

---

62. Lbk. I, lxii
63. W.P. McArthur "A brief story of English malaria" Brit. Med. Bull. 8 (1951) 76-79
64. Shrewsbury, op.cit., p. 50
65. See R. Hare, "The Antiquity of diseases caused by bacteria and viruses: a review of the problem from the bacteriologist's point of view" p. 115-131 in D.R. Brothwell and A.T. Sandison eds. Diseases in Antiquity (Springfield, 1967)

These peaks in mortality, particularly those in early spring and in autumn seem to have occurred consistently throughout the medieval period. Russell has worked out similar graphs for the post-Conquest period and has found corresponding fluctuations in mortality to the ones shown here.[66] The diseases causing these fluctuations must have taken a steady toll without necessarily becoming epidemic, but there is perhaps a comment on their importance in the annals in the continuation to Bede, where under the year 759 the annalist records that a "great pestilence" (magna tribulatio mortalitatis) afflicted Northumbria, and then qualifies it by saying that "the people were wasted by various kinds of malignant diseases, but especially dysentery".[67] This suggests that in some cases one should not look for one specific disease as the cause of a plague or pestilence mentioned in the sources, but rather to the regular endemic diseases among the population, which for some reason, whether crop failure, or war, or particularly hard weather, were able to reap an exceptionally high mortality in an individual year, and thus cumulatively became a mortalitas. This may be so even for some of the plagues of the seventh century, which have been suggested as being bubonic, since, for instance, in the account of the plague at Selsey a little boy in the monastery is described as having suffered from the disease "for a long time",[68] which does not seem likely if he had contracted bubonic plague. The outbreak in this monastery must presumably have been of some different disease.

---

66. J.C. Russell, British Medieval Population (Albuquerque, 1948), p. 101
67. "populantibus duris ac diversis egritudinibus, maxime tamen dysenteriae languore". Continuation to Bede, in B. Colgrave + R.A.B. Mynors op. cit.
68. H.E. iv, 14

The epidemics recorded by the chroniclers are inevitably the most dramatic ones, and there may be a tendency to over dramatise for the sake of effect. The account of the famines of the 1040's for example, makes it appear that the whole country must have been completely impoverished. Yet this was during the lifetime of Wulfstan of Worcester, and William of Malmesbury's translation of Coleman's Life draws no picture of a nation in extremis, but rather one of people going about their normal business. There is thus some danger of generalising from a particular local disaster to include the country as a whole. Whole centuries, such as the eighth, which passed with hardly a mention of plague; or the tenth, which has two references to plague and one to famine, also suggest that for long periods the Saxons were relatively free from serious epidemics.

Even so, when epidemics did occur their importance should not be underestimated. Their regular appearance and their high mortality is a reminder of how vulnerable the Saxons were in the face of serious illness and how incapable of checking it. The influence an epidemic can have on a population was never so grimly pointed out than in the fourteenth century Black Death, and though the Saxons faced nothing so devastating on a nationwide scale, at certain times and places they must have suffered almost as much.

CHAPTER 8: DEMOGRAPHY AND DISEASE

At first sight questions of demography may not appear to have much direct relevance to the medical history of the Anglo-Saxons. The size of a population is dependent on the relationship between mortality and fertility, in that a combination of high fertility and low mortality will produce a rapid increase in population, whereas the converse will cause an equally rapid decline. Both factors have medical implications. The mortality rate among the Saxons depends on the level of nutrition they enjoyed, their resistance to disease, their social environment, the degree of care received during the formative years of childhood, and so on. Fertility is also dependent on mortality, since if life expectancy is such that most women will die before reaching the limit of their reproductive lifespan, the number of pregnancies will be fewer than if they survived to reach the menopause. There are also many social factors involved, such as the age at marriage, and the frequency of marriage in a community. Russell[1] has suggested that the number of married people in the medieval serf population was only 28% to 34%, a very low percentage. The number of men joining the Church, with its insistence on celibacy, must also have helped reduce the number of marriages. The patterns of health and disease are thus important elements in determining the size and composition of any population.

For the Anglo-Saxon period information on many of these topics is scanty and inadequate, but recent work on skeletal material has suggested that it may soon be possible to make more reliable estimates of female fertility at least.

---

1. J.C. Russell, p. 59 in C.M. Cipolla, op.cit.

This is due to the development of a technique for estimating the number of children a woman has borne from the changes in the pelvis.[2] During pregnancy and labour the muscles and ligaments around the pubic symphysis become stretched and torn. Slight haemorrhages occur at their attachment to the bone, and cause pitting, erosion and small exostoses on the surface. From the extent and pattern of these changes an estimate can be made of a woman's parity. As yet the method is still subject to some degree of uncertainty, and it is not possible to estimate parity with a greater degree of accuracy than $\pm$ 1. But with further refinements of technique, and the examination of much larger samples of skeletons than has hitherto been possible, this development opens many possibilities for population analysis.

Few Anglo-Saxon cemeteries have been examined using this method, but the following table shows the results from two sites which have been considered in this way.

Table 8.1: Average parity per woman

Author	Site	No.	Parity $\pm$ 1	Average	Range	No. Completed Reprod.
Wells (unpub)	Jarrow	7	35	5(6.25)	3-8	5
Wells (in press)	N.Elmham	9	37	4.1(5)	2-9	6

The number of women in these groups is small, the total being only sixteen, but both groups produce broadly similar results. Only two of the Jarrow women are likely to have borne more children had they lived, and possible three of the North Elmham women, so even if all women had completed

---

2. T.D. Stewart, "Distortion of the pubic symphyseal surface in females and its effect on age determination", Amer. J. Phys. Anthrop., 15 (1957) 9-18

their families before dying the average parity would probably not have increased by much. If one considers pregnancies, as opposed to births, an addition must be made, since on average 1 in 5 pregnancies spontaneously aborts, and thus would not be recognisable in skeletal material. The average number of pregnancies for the two Saxon groups would be raised to 6.25 for Jarrow and 5 for North Elmham if allowance for miscarriages is made.

All these figures are within the range of five to seven pregnancies usually found for pre-industrial societies,[3] and for modern populations using no birth control,[4] so in spite of the small size of the sample the results seem generally acceptable.

It is also possible to make an estimate of parity for Anglo-Saxon women by using the documentary sources, though again the sample is small, and there are difficulties in its composition. Because of the nature of the available sources only royal families are recorded in any detail and even these are probably incomplete, since children dying in infancy and younger sons and daughters of no particular interest to the chronicler may be omitted. Anglo-Saxon family groups were extended, and kings frequently had two successive wives, and sometimes mistresses, but all children tend to be referred to indiscriminately as the king's sons or daughters. This means that two boys referred to as "the king's sons" or even as "brothers" are not necessarily sons of the same mother. An estimate of the number of children borne by an individual woman may therefore be too low on the

---

3. E.A. Wrigley, Population and History (1969) p. 17
4. Calvin Wells, 'Ancient obstetric hazards and female mortality', Bull. N.Y. Acad. Med. 51 (1975) p. 1244

one hand and too high on the other.

With these caveats borne in mind, it has been possible to work out the number of children born to twelve women referred to in the literary sources, and in some cases an estimate of the period of time during which the family was completed can also be made. The results are included in the following table.

As can be seen, these twelve women produced 56 children between them, an average of 4·6 each. No more than two of them are likely to have been capable of bearing other children, but two additions still have to be made, one to cover miscarriages, and the other to cover unrecorded children. This makes the average parity about 6 or 7, again within the same range as the skeletal evidence.

The Anglo-Saxon medical texts contain no information which might suggest the age at which a girl might first be capable of conceiving a child, but a Salernitan treatise, attributed to Trotula, and dating probably from the eleventh century, deals with this problem.[5] The different manuscripts show slight variations in the ages given, but in general menstruation is considered as beginning around the age of fourteen years, while the ages given for the menopausevary between thirty-five and sixty years. The Anglo-Saxons probably showed a similar sort of pattern. However, the fact that a girl reached the age of menarche at about fourteen years does not mean that she was able to start having children at that age, since most girls are incapable of conceiving for a year or two after the commencement of menstruation, because of the absence of ovulation.

---

5. See J.B. Post, "Ages at menarche and menopause: Some Medieval Authorities", Pop. Studies 25 (1971) 83-87

Table 8.2: Births, marriages and deaths

	Age at marriage	Number of children	Period of childbearing	Length of marriage
Eanflaed Oswiu	17 31	4 (2♀,2♂)	644-661 18 years	643-70 (W) 27 years
Aethelburh Edwin	 41	4 (2♀,2♂)	-	625-32 (W) 7 years
Seaxburh Earconbert	 c21	4 (2♀,2♂)	640-c655 15 yrs or less	640-64 24 years
Cynewise Penda		6 (2♀,4♂)	-	-
Osburh Aethelwulf		5 (1♀,4♂)	c830-849 19 yrs or less	c830-c854 24 years
Ealhswith Alfred	 20	5+?3 (3♀,2♂)	869-c880 12 yrs or more	869-99 (W) 30 years
Aethelflaed Aethelred	18	1♀	-	888-911 (W) 23 years
(2) Aelfflaed Edward	 20+	8 (6♀,2♂)	-	c896-c918 22 years
(3) Eadgifu Edward		3 or 4 (2♀?,2♂)	-	920-24 (W) 4 years
Gytha Godwin		7 (1♀,6♂)	-	1019-53 (W) 34 years
Emma Aethelred	 34	3 (1♀,2♂)	-	1002-16 14 years
		5 (2♀,3♂)	1002-18 16 years	
Emma Cnut	 c23	2 (1♀,1♂)	-	1017-35 (W) 18 years
Edith Edward	20+ 42	0	-	1045-66 21 years

(W) = wife outlived husband

The average age at marriage is also of importance in assessing fertility, because if the average is not till twenty-five years,for instance, a woman loses five years of her reproductive life, as compared with an average age of marriage of twenty years. According to the seventh century Penetential of Theodore girls were subject to their parents until the age of sixteen or seventeen, and after that age they could not be married against their will,[6] implying that at a younger age marriages might be arranged for them. The Confessional of Ecbert, possibly an Anglo-Saxon compilation of the eighth century, quotes Theodore, but changes the ages to thirteen or fourteen years.[7] Other Penitentials, which are mainly Frankish in origin, also quote thirteen or fourteen as the age of marriage, though Frankish practice generally seems to favour earlier marriage than in England. King Ethelwulf scandalised the West Saxons by marrying as his second wife a thirteen-year-old Frankish princess, though this would not have been particularly unusual within the Frankish kingdom itself. In any case, even if a few Saxon girls were married at the age of fourteen, it is unlikely that they could have borne children before the age of sixteen or seventeen at the earliest, as explained above.

When it is possible to work out from the sources how old a woman was at her marriage, the age normally falls in the late teens or twenties. Eanflaed was married at seventeen, and Aethelflaed at eighteen. Aelfthryth, Alfred's third daughter, married in her early twenties; Eadgifu, daughter of Edward the Elder, between sixteen and nineteen years, and her three sisters, Eadhild, Eadgyth, and Aelfgifu in their

---

6. A.W. Haddan + W. Stubbs, op.cit., p. 201
7. B. Thorpe, op.cit., p. 353

mid-twenties. With such a small sample any conclusions must necessarily be speculative, but if the sample does reflect the normal pattern of marriage it suggests that on average, a girl's first pregnancy might not be till the age of twenty or thereabouts.

It is much more difficult to estimate the age at which the menopause occurred. At least seven of the twelve women included in the table had probably come to the end of their reproductive lives before the end of their marriage, but it is impossible to give an accurate estimate of the number of years this covered because of the defects of the sources. The youngest child recorded may in fact have been succeeded by others who did not survive, and so have disappeared without trace. This means that any figures appearing in the column "period of childbearing" are only minimum estimates and may be several years too low.

Eanflaed was the only woman whose age could be estimated at the birth of each child. Aelfwine, the youngest child, was born when she was thirty-five. There may have been others after him, but it is possible that she might have reached the menopause before the age of forty. This seems young, but thirty-five is the same as that given in Trotula's treatise as the age at which menstruation ceases in the "moderately fat" woman, so it appears not to have been unusually early at that period.

The average length of reproductive life for the twelve women comes to sixteen years, though considering omissions, a truer estimate might be nearer eighteen years. With an average parity of six or seven children this would mean a pregnancy once every two or three years, an interval which is commonly found among communities who do not use birth

control today.[8] For the individual woman in the table the length of time between pregnancies varies from Aethelflaed's one child in twenty-three years to Aelfflaed's eight children born in fourteen years. According to William of Malmesbury Aethelflaed's family was limited because she was afraid of the pains of childbirth.

> "Because of the difficulty experienced in her first, or rather, her only labour, she ever afterwards refused the embrace of her husband, protesting that it was unbecoming for the daughter of a king to give way to a pleasure which after a time produced such painful consequences." [9]

Eanflaed's family can be spaced more precisely, since the dates of birth of three of the four children are recorded. Egfrith was born two years after the beginning of the marriage, and, though Osthryth's date of birth is not known, there must be at least a five year gap between either her and Egfrith, or between her and Aelfflaed, who was born nine years after Egfrith. Aelfwine was born seven years after Aelfflaed. Even supposing that there were other children besides those recorded the family is still well spaced out.

The medical texts give no hint that any form of contraceptive was used, though considering the length of time between births, it is possible they were employed. However, abortion and infanticide are commonly mentioned as a means of getting rid of unwanted children.

There are several medical recipes for herbal drinks to expel a dead child from the womb, which could equally well be used to dispose of a live one. A couple of these prescribe pennyroyal,[10] which was in common use as an abortifacient at

---

8. R. Hinshaw, P. Pyeatt and J-P. Habicht, "Environmental effects on child-spacing and population increase in Highland Guatemala", Current Anthropology 13(1972) 216-30
9. Wm. of Malmesbury De Gestis Regum Anglorum ed. W. Stubbs (1887) Vol. I, p. 136
10. ps.A. xciv, 7; Lbk. III, xxxviii

least until the end of the nineteenth century.[11] All the penetentials prescribe penalties for committing abortions, and that of Ecgbert begins, "If a woman kills the child within her with drinks or other things, or kills it after it is born, she is to fast 10 years ...".[12]

These methods are more likely to have been the recourse of the peasants who could less well afford extra mouths to feed, than of the royal families, and it is noteworthy that Theodore, in prescribing the penalties for infanticide states that the normal penance is fifteen years but for a poor woman it is only seven years.[13] Half a century after Theodore, infanticide was still a problem and Boniface, the leader of the Anglo-Saxon missionaries to Germany, wrote an outspoken letter to King Ethelbald of Merica, complaining about his libidinous nature and the fact that he had not even bothered to take a lawful wife. These evil customs are spreading among the English as a whole, and can only result in the sapping of the nation's moral fibre. He goes on:

> "It should be noted that under that enemy there lurks another monstrous evil, namely homicide; because when these harlots, whether nuns or laywomen, bring forth an offspring conceived in evil, they for the most part kill them, not filling the churches of Christ with adopted sons, but crowding graves with bodies and hell with unhappy souls." 14

This passage not only suggests that infanticide must have been a fairly widespread custom, but also that if these "harlots" attempted to use any kind of birth control it could not have been very effective.

Though limiting the population, in a skeletal series

---

11. See R. Roberts, The Classic Slum (1971) p. 100
12. Thorpe, op.cit., p. 368
13. Haddan + Stubbs, op.cit., Vol. III, p. 189
14. D. Whitelock, E.H.D. Vol. 1 no. 177

infanticides would still be recognisable as births, while in the documentary sources they would probably not be recorded.

Apart from these drastic measures there are included in the penitentials prohibitions and penalties for intercourse at certain periods of the year, mainly related to the Church festivals. These periods are the forty days of Lent, Advent, seven days before Pentecost, three days before taking Communion, Sundays, and three months before the birth of a child and forty days afterwards. Since in all these prohibitions cover about half the year they must have helped to limit conception quite considerably, if adhered to. Some people would no doubt have preferred to perform the penance.

Gregory the Great, writing to Augustine at the beginning of the seventh century, says that couples are not to have intercourse until their child is weaned, and adds:

> "A culpable habit indeed has arisen in places between the married pair, that the woman neglects to feed the child that she has borne, and hands it over to others to feed. Now this seems to occur through incontinence only, for they neglect to feed their own babes when they will not live apart from their husbands." 15

Presumably though, most people would have suckled their own children, and it would have been mainly the upper ranks of society who employed a wet nurse. The more usual custom seems to have been for a family to have a nurse who was a slave, and the seventh century laws of Ine state that a gesithcund man (who appears to have ranked below the thegn in terms of status), was allowed to take with him his reeve, his smith, and his children's nurse when he left his land, suggesting that a nurse was considered a vital partof the household. The Leechbooks

---

15. Bede H.E. ii, 27

give no hint of the age a child was weaned, and unfortunately, quite a large section of the text dealing with problems of pregnancy and childbirth is missing from the manuscript. Gynecological treatises surviving from the thirteenth century imply that a child was normally weaned at the age of about two years, and Anglo-Saxon practice was probably much the same. Gregory's extreme view seems quickly to have been dropped in favour of the forty days abstinence after birth prescribed in the penitentials. The fact that a mother was breastfeeding her baby, would make conception at this time less likely anyway, since ovulation is inhibited during lactation.

Such evidence as is available suggests that on average Anglo-Saxon women bore five, six or seven children over about a twenty year period, and though the samples are small the documentary evidence and the skeletal evidence are in general agreement on these figures. If all these children had survived to reach adulthood the population would have increased very rapidly, but mortality in infancy and childhood combined to reduce the numbers considerably. Any estimates of population increase (or decline) are thus dependent on some knowledge of the rate of mortality during childhood, and the sources are of little help here. Though it is known that of Aethelburh's four children only Eanflaed, the oldest, survived to reach adulthood, and that Ealswith had many children who died in infancy, the children who died young had least chance of being recorded by the chroniclers and any estimate of infant mortality made from recorded children would be hopelessly low.

The evidence from cemeteries might be thought to be more reliable, but there are considerable problems in its use. Many cemeteries are not excavated in their entirety, so it is

impossible to know whether the group of skeletons which are excavated represents a fair cross section of the cemetery population. A skeletal group with a very small number of infant burials may be due to the fact for instance, that it was customary to bury infants in one particular corner of the burial ground which was not excavated, rather than that the community had a low mortality rate. Even a completely excavated cemetery may not include the whole community, since men dying away from home may be buried elsewhere, or children dying very young may not be considered worthy of burial in the main cemetery, or there may be other patterns of migration into and out of the community which mean that the burials in the cemetery do not reflect the normal population of the area. In most cases the number of infant burials recovered seems far lower than one would expect, and the data is generally inadequate for making predicitions about infant mortality.

Many modern governments in developing countries lack adequate census data to make demographic projections, and the United Nations Department of Social Affairs has provided a set of model life-tables, each relating to a different life expectancy at birth, starting at 20 years (level 0) and ending at 73.9 years (level 115).[16] If one has only partial information, for example, reliable information on adult mortality but none on infant mortality, it is possible to project the information backwards by choosing the appropriate level in the model life-tables, and read off the estimated figure for infant mortality. The tables must be used with caution, however, since they are based on pooled data from many sources

---

16. U.N. Dept. of Social Affairs, Population Branch, Report No. 25, Methods for Population Projection by Sex and Age, (New York, 1956)

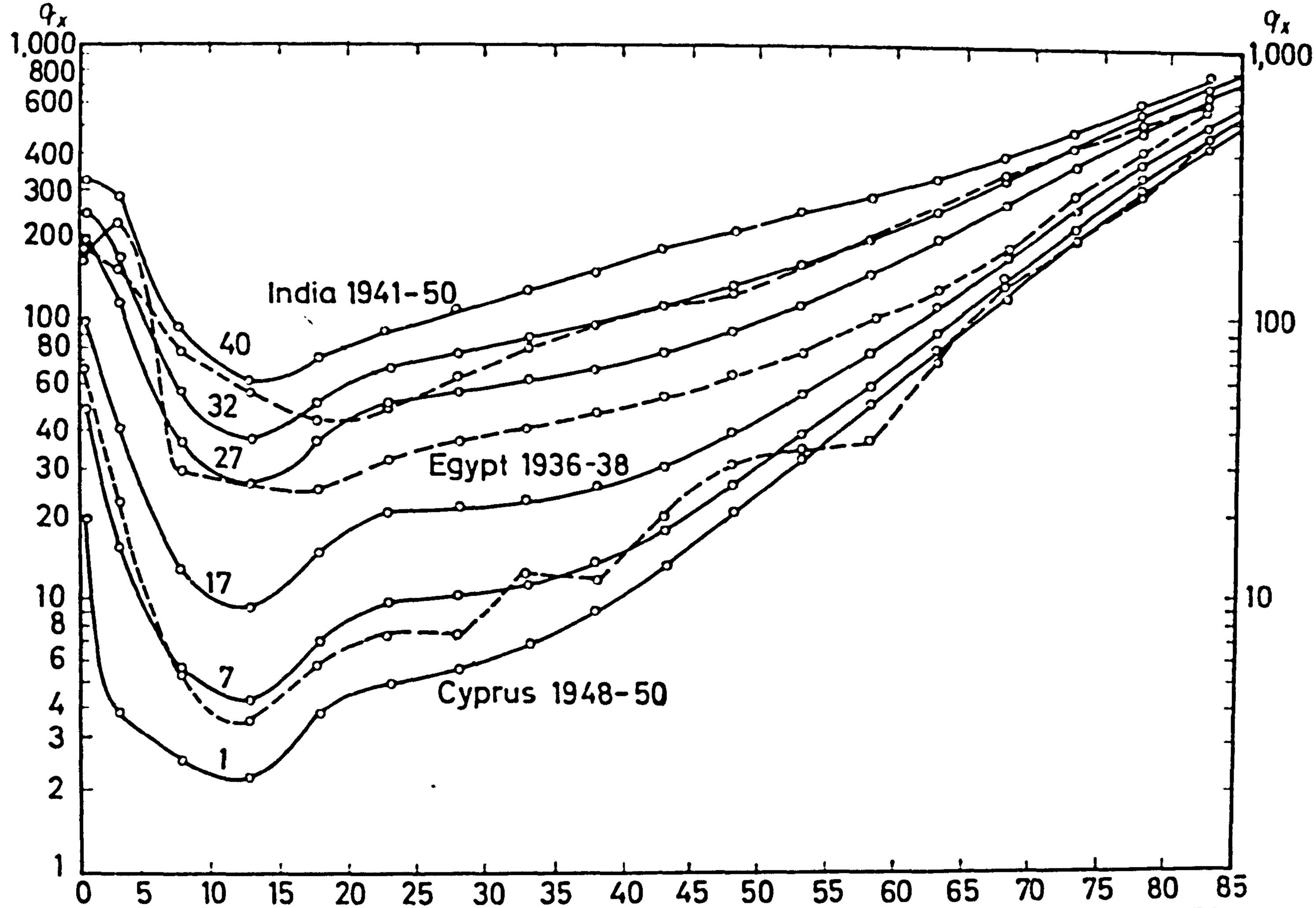


Plate 21. Figure showing probabilities of death in some modern life tables and in empirical life tables. From Acsadi and Nemeskeri, op.cit. p. 49.

and represent average conditions. Individual populations may show quite considerable variations as can be seen in the following figure,[17] which compares the U.N. hypothetical data with some actual data from India, Egypt and Cyprus.

The actual data for the three countries differs from the theoretical models at almost every point. The Cyprus curve, for instance, starts at a point above level 7, then drops below it at age 10, and intersects it again several times before falling below level 1 at two points. The other two curves show similar variations. The model life tables are therefore only useful as guides and not as absolutes, and it is probable that they are less accurate for populations showing high mortality than for others, because the models for those levels are based on less extensive information.

Nevertheless, it is still of value to compare the information on infant mortality and child deaths derived from the cemetery evidence with that suggested in the model life tables. This is done in the following table. In demographic terms infant mortality is considered as the number of deaths occurring between birth and age one, and children are those below the age of fifteen years, rather than eighteen, which is the more normal anthropological division. Fifteen is probably a more logical age to be considered as the beginning of adulthood for the Anglo-Saxon period, since although not physically mature a child of that age was expected to take on the responsibilities of an adult, and thus became a productive rather than a dependent member of the community.

---

17. See plate 21.

Table 8.3: Infant and child mortality rates from U.N. model life tables compared with rates derived from cemetery evidence

Level	Life expect. at birth $^{o}e_{o}$	Infant mortality per 1000 (0-1)	% child deaths (do-14)	Site	Infant mortality (0-1)	% child deaths (do-14)
0	20	320	57.6			
5	22.5	299	53.5			
10	25	279	49.5	Owslebury	316	49.0
15	27.5	261	45.9			
20	30	245	42.6			
25	32.5	229	39.5			
30	35	214	36.6			
35	37.5	199	35.1	Jarrow	57	35.5
				Monkwearmouth	129	35.7
40	40	186	31.2			
45	42.5	172	28.6	*Cannington	169	29.0
				Thetford	128	28.2
50	45	159	26.2	*Alton, Hants	?	26.2
65	52.5	65	19.3	Caerwent	47	18.4
70	55	70	17.1	N.Elmham	12	16.1

Source: U.N. model life tables (both sexes combined)

Sites: All Wells (unpublished) except * British Museum (Natural History) data sheets (unpublished).

All the sites included are Saxon or Dark Age in date, except for Owslebury which is Iron Age/Romano-British, and they are placed in the position in the table which corresponds most closely to the percentage of child deaths derived from the model life-tables.

It is immediately obvious that in most cases the infant mortality rates from the skeletal series are far lower than the percentage of child deaths would have suggested. The exception is Owslebury, where the child deaths place it at level 10, but the infant mortality rates suggest it should be at level 0, where life expectancy at birth is only 20 years. The reason for this exceptionally high infant mortality is unknown, but it is included for the sake of comparison.

The only site where the child deaths and the infant mortality rates agree is at Cannington, where both suggest a life expectancy at birth of 42·5 years. This is interesting, since Cannington is the only cemetery in this group of sites which has been excavated in its entirety, though the resultant life expectancy is far higher than would generally be accepted from other sources of evidence. At this level expectancy at age 20 would be a further 39·3 years, as opposed to 12·6 years calculated for the adult skeletons from the group.[18]

It is sometimes assumed by demographers that infant mortality rates in pre-industrial Europe below the range of 200 to 250 per thousand must be inaccurate,[19] and as a corollary, that life expectancies at birth of more than 35 years are not acceptable for this period. This view has been challenged by Wrigley, as a result of his work on the parish registers

---

18. D. Brothwell "Palaeodemography and Earlier British Populations" World Arch. 4 (1972) 75-87, Table 4
19. T.H. Hollingsworth in D.V. Glass + R. Revelle, Population and Social Change (1972)

from Colyton, a parish in Devon.[20] His calculations of infant mortality rates over three hundred years from 1538 to 1837 never reach 200, and even when corrected for possible under-registration come within that range only once. They are also much lower than the rates that might be expected if the childhood mortality rates are related to the U.N. model life-tables. He suggests that it may be false to assume that mortality rates were always high in pre-industrial communities, and that they may well have differed from the developing countries today on which the U.N. life-tables are based. He also points out the lack of correlation between the death rates for age 0-1, and 1-14, a fact already noted when considering the cemetery evidence, and stresses that it thus does not follow that where infant mortality rates are unknown, they can be read off from a knowledge of death rates later in childhood, or even in adulthood. This lack of parallelism in mortality rates is again reflected in the life-tables derived by Acsadi and Nemeskeri from their various skeletal series.

Table 8.4: Life expectancies at birth and age 18

Table	Site	Date	Life Expectancy	
			At birth $^{\circ}e_{o}$	At age 18 $^{\circ}e_{18}$
121	Intercisa and Brigetio	1st-4th cs AD	27.75	24.96
124	Keszthely-Dobogo	Late Roman	35.19	30.23
127	Sopronköhida	9th c.	26.65	30.46
130	Pooled Hungarian data	10th-12th c.	28.73	28.68

Source: Gy. Acsadi and J. Nemeskeri, History of human lifespan and mortality (1970) (Budapest)

20. E.A. Wrigley "Mortality in pre-industrial England: the example of Colyton, Devon, over three centuries", p. 243-273 in D.V. Glass and R. Revelle, op. cit.

In the examples illustrated it can be seen that translating backwards from expectancy at age 18 is not a reliable way of estimating life expectancy at birth. For instance, both the Keszthely-Dobogo and Sopronköhida populations have life expectancies of about thirty years at age 18, yet one has a life expectancy at birth of 35.19 years and the other only 26.65 years. Equally, the expectancy at age 18 for the Intercisa and Brigetio populations would imply a life expectancy at birth of less than 20 years, if the U.N. model tables were used as a guide, as opposed to the 27.75 years derived from the actual data.

One reason why the U.N. tables are unreliable for early historic populations is that they assume modern mortality conditions in which females have a better life expectancy than males. This is not so in many early populations, as is evident from the following table:

Table 8.5: Average age at death for males and females from some Anglo-Saxon sites

Site	Period	Male Years	No	Female Years	No	Difference
Caister-on-Sea	mid-Saxon	36.8	(38)	31.7	(39)	5.1
Caerwent	8-12c. AD	31.6		31.7		+0.1
Red Castle, Thetford	Late Saxon	38.1	(13)	30.4	(15)	7.7
North Elmham	Late Saxon	38.2	(62)	35.8	(59)	2.4
Monkwearmouth	mid-late Saxon	40.8	(26)	37.6	(17)	3.2
Jarrow	mid-late Saxon	41.3	(43)	42.2	(40)	+0.9
Thorpe, St. Catherine	Late Saxon	36.4	(27)	29.8	(15)	6.6
	Totals:	37.6		34.2		3.4

Source: All Wells (unpublished) except Red Castle, in Calvin Wells, "Report on the human skeletons from Red Castle, Thetford", Norfolk Archaeology 34 (1967) 155-86

In five of the seven sites the men have substantially better life expectancies than the women, while at Caerwent and Jarrow the women have a marginal advantage over the men. On average the men outlive the women by 3.4 years. It has usually been assumed that the higher mortality of women was due to the hazards of childbirth, but it has recently been convincingly argued by Wells that childbearing was not a significant factor in causing women to die younger than men, and that poorer nutrition was a contributory cause.[21] He points out that it is unusual to find many graves where a mother is buried with a newborn child, and even where they are found together the child may not necessarily be the child of that particular woman, or the woman may have died of disease or from some other cause unrelated to childbirth as such. It is only where a woman's skeleton is found with a foetus impacted in her pelvis that there can be no doubt as to the cause of death.

Such a case occurred at Kingsworthy, Hampshire, where the body of an Anglo-Saxon woman was found with the legs and feet of a baby still within her pelvis.[22] There are several possible causes to account for her death, the most likely being haemorrhage from placenta praevia occurring late in labour, or a "contraction ring"or cramp in the uterine muscles which normally expel the baby during labour, and which in this case trap it within the uterus thus killing first the baby, then the mother; or a third alternative is that the child's death

---

21. Calvin Wells, "Ancient obstetric hazards and female mortality", Bull. N.Y. Acad. Med. 51 (1975) 1235-1249
22. S.C. Hawkes and C. Wells, "An Anglo-Saxon obstetric calamity from Kingsworth, Hampshire", Medical and Biological Illustration 25 (1975) 47-51

was due to a defect in the umbilical cord. The cord may either be too short to allow the baby to emerge fully, or it may be long, but twisted once or twice round the child's neck. If the cord is not cut the child soon dies. It is impossible to say which of these alternatives was the cause of the death of mother and child, though the cord round the neck is considered by the authors as the most likely possibility. The point to make however, is that cases such as Kingsworthy are very rare and would make little difference to the sex and age ratios on any site. It is probable that puerperal causes played a much smaller part in affecting female mortality than has previously been thought.

The alternative suggestion, that nutrition was the main cause of earlier female deaths, is supported by several lines of evidence. One is the occurrence of enamel hypoplasia, which are defects in the enamel of the teeth caused by illness or malnutrition in early childhood. At North Elmham it occurred in approximately half the dentitions, of which 70.9% were female. At Monkwearmouth the incidence was lower, but women were affected twice as often as the men. Other evidence comes from Harris's lines, which also reflect illness and malnutrition during childhood and adolescence, and again girls are found to suffer more severely than the boys. This suggests that in times of scarcity the women and girls were last in the queue for food, while the men and boys, were better fed. Such a custom was commonplace even in working class households at the beginning of this century, where father as the working man always took the lion's share of the food,[23] and it seems not

---

23. R. Roberts, The Classic Slum (Manchester, 1971), p. 84-85

unlikely in male orientated societies like the Anglo-Saxons. Since adequate nutrition in childhood is vital for full growth, persistent undernourishment of the girls meant that they were probably never fully healthy as adults, and this is reflected in their earlier age at death.

The average age at death for all Saxon women is 34.2 years, which implies that their fertile period would only last about 14 years, shorter than would be expected from the documentary evidence, and a reduction of about one third of their biological capacity. There are considerable problems in interpreting these life expectancies in the mid-thirties, since life expectancies of 15 to 20 years at age 20, which is what these averages imply, are well below the lowest level in the U.N. life-tables. Level 0, which relates to a life expectancy at birth of 20 years, has a life expectancy of 26.1 years at age 20. The percentage of child deaths at this level is 57.6% and if one is to assume that Anglo-Saxon mortality was at least as high, it would mean that each woman would have to become pregnant at least six times in order to have two children survive to adulthood. In a population where marriage was not universal an average of two surviving children to each couple would not even be sufficient to replace the population, let alone increase it. And though there are arguments about the precise figures involved there is general agreement that the population doubled or trebled during the Anglo-Saxon period, which would seem impossible at the mortality levels suggested by the adult life expectancies derived from skeletal series.

Another puzzling factor of the age distribution of the skeletal series is the almost complete absence of elderly people. The percentage of the population aged 60 or more appears

to be between 1-2%.[24] At Level 0, 8.5% of the population might be expected to reach the age of 60, and 3.5% are still alive at 70. At Level 35, which corresponds to the child mortality found at Monkwearmouth and Jarrow the figures are 31.3% and 18.2%. Though it has been emphasised many times that the U.N. life-tables are probably not reliable when considering evidence from the Anglo-Saxon period such variation is much greater than expected. Moreover, a cursory glance at the literary sources does not suggest that sixty was regarded as an exceptional age to have reached. As a comparison with the skeletal series life expectancies were derived from the ages of a group of people recorded in the documentary sources. Such a group inevitably includes kings and bishops and those from the upper classes of society, since these are the people who are the concern of the writers of chronicles, histories and lives of saints, from which this information is drawn. But since no other sources are available, and since there seems to be little differential mortality between social classes in the Anglo-Saxon period (as will be explained more fully later), ages have been estimated for 200 people, 100 kings queens and nobles, and 100 ecclesiastics.[25]

Their ages were worked out in various ways. In some cases the age of the individual is given when his death is recorded, in others the length of the reign or episcopacy

---

24. Brothwell, op.cit., Table 6
25. The sources used were:
Anglo-Saxon Chronicle ed. G.M. Garmonsway (1953)
Bede, Ecclesiastical History ed. B. Colgrave + R.A.B. Mynors (Oxford, 1969)
F.M. Powicke + E.B. Fryde, Handbook of British Chronology (1961)
D. Whitelock, Anglo-Saxon Wills (Cambridge, 1930)
William of Malmesbury, De Gestis Regum Anglorum ed. W. Stubbs (1887)
F. Wormald, English Kalendars before A.D. 1100 (1933)

is known and the date of birth can be estimated fairly accurately, and in others the dates of birth and death are given independently. Some of the ages are thus approximations, but they are not likely to be in error by more than five years, and in many cases they are probably closer to the true age of the individual than an estimate made from a skeleton. As with the skeletal material, only individuals over the age of 18 years are included in the group.

The sample of 200 people (181 ♂, 19 ♀) lived for a total of 11,435 years, which gives an average age of death of 57.7 years. If the group is divided into lay and religious, the life expectancy for the ecclesiastics (97 ♂, 3 ♀) is found to be 64.6 years, and the life expectancy for the layman (84 ♂, 16 ♀) is 49.7 years. The considerable difference between these two estimates can be explained in several ways. The simplest explanation is that since a man could not become a priest before the age of thirty and since he could not be a bishop before he was a priest, the life expectancy for the group of bishops is in fact an average based on people who had already survived to the age of thirty, rather than to an age of eighteen. This must raise the estimate by quite a number of years. Moreover, the nature of a bishop's office meant that he was less likely to come to a violent end, - only 3% of bishops in the sample suffered deaths by violence, as opposed to 21% of the kings.

The life expectancy of the nobility is thus the only estimate that can be compared with that of the skeletal population, though in fact this probably included a number of ecclesiastics, particularly at sites like Monkwearmouth, Jarrow and North Elmham. Even so, the average age of death for the males in the skeletal group (37.6 years) is twelve years

lower than that calculated for the kings. This seems a large discrepancy and one that cannot be entirely explained away in terms of better nutrition, housing, clothing, and so on for the upper classes of society.

If the male deaths are divided by decade, and the group from the documentary sources are compared with skeletal groups from two Saxon sites the results are striking.

Table 8.6: Age distribution of adult deaths

CANNINGTON			NORTH ELMHAM			DOCUMENTARY SOURCES		
Age	Number	%	Age	Number	%	Age	Number	%
18-27	16	30.2	18-27	13	20.9	18-27	12	14.4
28-37	20	37.7	28-37	12	19.3	28-37	12	14.4
38-47	10	18.9	38-47	32	51.6	38-47	15	18.0
48-57	4	7.5	48+	5	8.0	48-57	22	26.0
58-67	3	5.7				58-67	15	18.0
68+	0	0.0				68+	8	9.5

The table shows some interesting variations. At Cannington mortality is extremely high in the first two decades of adult life, so that 67.9% of the adult population are dead by the age of 38. After that mortality declines more gradually to the age of 68. At North Elmham mortality is much lighter for the first twenty years, but in the third decade there is a sudden sharp and dramatic increase, which accounts for more than half the male population within ten years. In the third group mortality is much more evenly spread, rising gradually to a peak in the fourth decade, and declining gradually thereafter.

The most noticeable thing about the two skeletal groups are the small numbers reaching anything which could be considered old age, a point which has been commented on before. At Cannington only 13.2% of the male population reached the age of 48, whereas at North Elmham the figure was even lower, at

8.0%. With these should be compared the evidence from the documentary sources which indicate that 53.5% of this group reached 48 years. The enormous difference between these two types of evidence is difficult to explain, for there are few suggestions in the texts that the nobility lived sheltered, pampered lives free from the rigours endured by the short-lived peasantry.

Penda, King of Mercia died in battle at the age of 72 in 654; ealdorman Byrhtnoth, the hero of the battle of Maldon, was about seventy at his death, and Ethelbald of Mercia fought battles well into his sixties, and was still going strong when he was murdered by his bodyguard in 757. This view of a vigorous, upper class, active until well past middle age is difficult to equate with the anthropologists' gloomy picture of the mass of the population dead or debilitated before they reached forty.

The literary estimates can be corroborated however. Byrhtferth's Manual, written in 1011, gives a contemporary estimate of the length of a man's life. He divides life into four ages: childhood up to 14 years, youth to 28 years, manhood to 48, and old age to 70 or 80 years. These figures fit very well with the literary evidence. Byrhtferth's statement that old age begins at 48 and ends at 70 or 80 is borne out in the table, both in the sudden rise in mortality in the decade following 48 years, and also by the fact that about 10% of the sample survived to 70 or 80. Though Byrhtferth's divisions of life are based ultimately on Isidore of Seville's Six Ages of Man[26] the age ranges he gives are not exactly

---

26. Isidore of Seville On Man and Monsters xi.2. 1-8, in "Isidore of Seville: the Medical Writings" trans. W.D. Sharpe, Trans. Amer. Philos. Soc. 54 pt. 2 (1964)

the same, and can probably be taken as fairly accurate for the Anglo-Saxon period. If the majority of people barely lived past thirty-five the common observation of his readers would be enough to prove him wildly wrong. And it should be noted that Byrhtferth's readers would not be bishops (average age at death 64.6 years), but poor clerks who could not cope with the Latin manuals, and who, for the most part, would come from peasant backgrounds.

It is hard to reconcile all this evidence with the life expectancies in the lower thirties produced by the anthropologists, though there seem to be three ways of making the attempt. One is to assume that for some reason the ages in the literature are incorrect and are being consistently overestimated. Another is to say that since the estimates in the literature come from the upper reaches of society the differences are purely due to disparities in social class. The third is to suggest that the methods used to calculate the age at death from skeletal material are producing results which are too low, and that the estimates derived from the written sources give a more accurate picture.

It is not difficult to determine the ages of a reasonable number of people from the evidence provided in the literary material. Age was of some significance to the Anglo-Saxons. The age at which a child became a youth, or a boy became a man; the earliest age at which a boy or girl could marry, the age at which a man could become a priest, and so on, were all precisely stated and required that most people must have had a general consciousness of their age at any one time. Moreover, the individuals recorded in the sources are inevitably those of note, and their lives therefore subject to closer record than the average person. The fact that Bede, William

of Malmesbury, and other writers refer so frequently to the ages of their heroes at various stages of their lives suggests that age was a matter of interest, if not of importance; and the keeping of calendars and chronicles meant that dates and ages were regularly recorded. It thus seems likely that if a man's age is given at the time of his death or if the dates of his birth and death are recorded, they will probably be accurate, within narrow limits.

The evidence is not always as straightforward as this however, and is sometimes only partial, as for instance when the length of a king's reign is recorded, but the age of the king at his accession is not known. In this case other information such as the age of the parents, the date of the marriage, or the age of any brothers or sisters must be used to make an estimate of the age in question. In most cases it is then possible to calculate ages with a degree of accuracy of $\pm$ 5 years, though with a few this must be extended to $\pm$ 10 years. Obviously this is less precise than one would hope for, but even ages with a possible variation of $\pm$ 10 years are within the range of accuracy accepted for osteological estimates. In general it would seem fair to say that the estimates made from the written sources are probably at least as precise as those made from skeletal material.

Another explanation for the differing life expectancies must therefore be considered - that of the difference in status between the two groups. Not much can be made of this however. When J.C. Russell examined the population trends in medieval England he compared the life expectancies of the peasants on some Winchester manors with those of fiefholders in the same period (1245-1347) and found that there was no significant difference in the age at death in spite of

the difference in status.[27] His information came from the list of heriots (paid at death or retirement) from the Winchester estates. By dividing the number of heriots paid each year into the total number of holdings from which they were due he calculated the life expectancy of the peasants at the time they entered their holdings. The fiefholders' life expectancy was derived from the inquisitiones post mortem which record the date of death of the holder of the property and the age of the heir. It was thus possible, by combining the inquests, to find the age at death.

Anglo-Saxon society showed if anything greater mobility between ranks than the medieval period, and there was no large class of depressed peasantry. The average size of family holdings in the eleventh century was larger than in the fourteenth[28] and there were generally narrower distinctions between rich and poor. If, as Russell's evidence suggests, there was little differential mortality between social classes in the medieval period, there should certainly be none in Anglo-Saxon times.

It is also possible to make a more direct comparison between estimates by comparing the life expectancy of the peasants on the medieval Winchester manors with that of the medieval series of skeletons from Wharram Percy. At age twenty the life expectancy of the Winchester peasants was about 27 years;[29] and of the Wharram Percy peasants 15 years.[30] When

---

27. J.C. Russell "The pre-plague population of England", Journal of British Studies, 5 (1966) 5-2
28. M.M. Postan, The medieval economy and society (1972) p. 35 ff
29. G. Ohlin "No safety in numbers: some pitfalls in historical statistics" p. 84-89 in Industrialisation in Two Systems (1960) ed. H. Rosovsky
30. D. Brothwell "Palaeodemography and earlier British populations" World Archaeology 4 (1972) 75-87

one considers that the corresponding expectancies for the two Anglo-Saxon groups are 30 years and 18 years it is apparent that the differences between the osteological estimates and those from the literary material are of the same order in each case.

The estimates in the literature come from various sources of evidence, yet support each other well, and there seems no convincing reason to assume they are erroneous. Nor do the distinctions of social class seem adequate to explain the gap between the literary and osteological estimates. The only other possible explanation seems to be that the methods used in calculating age from skeletal material are producing results which are too low, particularly when the skeleton is that of an older person.

For a non-specialist to criticise the techniques of physical anthropologists is a hazardous enterprise, Fortunately, however, some support comes from the anthropologists themselves. In a recent book, the History of Human Lifespan and Mortality (1970) Gy. Acsadi and J. Nemeskeri have reassessed the conventional methods for determining age, and developed what they call the "complex" method of age determination.[31] This is based on age changes in the cranial sutures, humerus, femur, and pubic symphysis, used in combination. The method was tested by examining 105 skeletons of known age and sex, and was found to have an accuracy of 80-85% with a margin of error of $\pm$ 2.5 years in individual cases.

Using the complex method to re-examine series of skeletons already published by other investigators, the authors produced

---

31. Gy. Acsadi and J. Nemeskeri , op.cit., chap. 3 p. 100-137

life tables much closer to the U.N. model life tables than the previous results; and in an important paragraph they write:

> "For the sake of control we have made two analyses of a completely excavated cemetery of the 10-11th centuries, the Kerpuszta series containing about 400 elements. On the first occasion we determined the ages at death with the usual, 'classical' methods. We studied the closure of cranial sutures, the state of epi- and diaphyses, condition of teeth, and some external morphological features, probably in the same way as Angel analysed the Khirokitia series. Following this, we made another analysis of the series, using the complex age-determination method described in Chapter III, and had to modify the age distribution drastically as a result. The sharply protruding mode of ages 30-34 vanished completely in the new age distribution, and was shifted to the middle adult age, where it was less conspicuous; an adequate number of individuals who died at old age was determined at the same time ..." 32

In terms of life expectancy the average age at death for this group was calculated to be 47.1 years,[33] very similar to that estimated for the Anglo-Saxons from the literary evidence. Their results suggest moreover that if the Saxon skeletons were re-examined according to the complex age-determination method, the present discrepancies between the skeletal averages and the literary averages might disappear, and the problem would be solved.

The methods proposed by Acsadi and Nemeskeri have met with a generally favourable reception from fellow anthropologists and few serious criticisms have so far been made.[34] It has been recognised for some time that the conventional methods of aging skeletons have not produced results that are as accurate as one might wish, and the development of techniques which seem to offer greater reliability has been welcomed. The

---

32. Ibid., p. 190
33. Ibid., Table 91 p. 251
34. See e.g. the series of reviews in Current Anthropology 15 (1974) p. 495-507

fact that estimates derived from the literary material produces results of the same order seems more than coincidence, and gives added support to their work.

The evidence suggests that life expectancy for adult Anglo-Saxons should be raised from the 37 years previously derived from the skeletal material to a figure nearer the 49 years estimated from the documentary sources. This would also help bring the figures from the cemetery sites closer into line with the levels suggested by the child mortality rates, and create a more acceptable population balance. The upward readjustment of adult life expectancy also has effects on fertility, since if a woman of 20 can look forward to another 25 or 30 years of life she will be able to complete her family before death supervenes, rather than being abruptly cut off in early middle age, as seemed previously to be the case. A longer lived population also means a more productive work-force, and presumably higher living standards as well.

Nevertheless, reliable figures for life expectancy at birth are still elusive, and it would be premature to generalise when the information is so inadequate. This chapter has tried to suggest ways in which new developments in the examination of skeletal material, the use of life tables, and other demographic techniques, and detailed consideration of the literary sources can all be combined to produce information about the demographic background of the Anglo-Saxons. It has also pointed out the pitfalls and inadequacies of such methods. At present the number of excavated cemetery sites which have been properly examined are few and the individual samples are small. There is also considerable variation between sites and it would probably be unwise to

draw any overall conclusions from such evidence. At present the results are disappointing and serve rather to confuse than clarify the situation. But the methods which are being developed have considerable potential, and it is to be hoped that in the future when much larger groups of skeletons are available for study and the techniques of study have been further refined, that much more reliable information about the dynamics of the Anglo-Saxon population will emerge.

CHAPTER 9: PALAEOPATHOLOGY AND THE SOCIAL BACKGROUND TO DISEASE

The importance of palaeopathology and its relevance to this survey of the medical history of the Anglo-Saxons has already been discussed in chapter one. The present chapter considers in more detail the information which can be derived from the study of skeletal material, and where possible relates it to the archaeological and documentary evidence, to build up a picture of the social and medical background to the Anglo-Saxon period.

One of the problems in using this kind of evidence is the great lack of detailed reports available for study. Only about half-a-dozen Saxon sites have had full reports of their cemeteries, and most of these are as yet unpublished. Other sites have had reports which have included only anthropometric data, or which have only examined the skulls and not the complete skeleton, or which have included only means and averages for the group without quoting information for each individual; or for one reason or another are generally unsuitable for inclusion in this study.

Often the inadequacies of the report have nothing to do with the person making the examination of the material, but rather more with the inadequacies of the skeletons themselves. Some soils are very destructive of bone and the skeletons are thus difficult to excavate except in a fragmentary state; or in cemeteries which have had long usage, graves have cut into one another, and parts of bodies may have been disturbed or reinterred in different graves; or it may have been impossible to excavate more than a small part of the cemetery so that the number of skeletons to be studied is really too

small a group from which to draw any significant conclusions. Even the small group of cemeteries which have been reported on in full should be used with caution. To lump together evidence from 7-8th century Northumbria (Monkwearmouth and Jarrow), with evidence from 10-11th century Norfolk (Thetford Red Castle and North Elmham) is probably misleading, though to compare the similarities and differences between the groups is interesting.

Physical Type

Having said all this there is still much to be gained from utilising such information as is available. At the most basic level it is possible to find out about the physical characteristics of the Anglo-Saxons. In the report on the Jarrow skeletons they are described as a "fairly sturdy and well built people of medium stature",[1] and the community at North Elmham are described thus:

> "We may picture the group as being mostly lean and muscular, probably with little surplus fat, and with a lithe, upright bearing until the onset of arthritis stiffened and bowed them. Their wrists and ankles were compact and slender; their hands strong, with a powerful grip." 2

In general Anglo-Saxon men averaged about 5'7-8" in height, the women about 5'2"; the variations between different sites being only a matter of an inch or so. These averages are only slightly shorter than those for modern populations.

Different racial characteristics can also be derived from the skeleton, particularly from the skull, by the comparison of various indices. The commonest of these is the

---

1. Calvin Wells (unpublished)
2. Calvin Wells (unpublished)

cephalic index, which measures the degree of round-headedness or long-headedness in an individual. The index is calculated as follows:

$$\frac{\text{Maximum skull breadth}}{\text{Maximum skull length}} \times 100$$

The index range is normally divided into three sections;

Dolichocranial	x - 74.9
Mesocranial	75 - 79.9
Brachycranial	80 - x

Anglo-Saxon groups generally fall into the dolichocranial category, with some overlap into the mesocranial group; though over the centuries British populations have shown a tendency to increased brachycranialisation, and there has been considerable variation in skull characteristics during different historical periods.[3] In the past it was hoped that the study of cranial measurements might make it possible to distinguish Angles from Saxons from Jutes in pre-Conquest cemeteries,[4] but this has proved not to be so. Even a recent and much more sophisticated computer analysis of eleven different cranial vault measurements has added little new information.[5] From the archaeological point of view it is anyway much easier to distinguish the different Anglo-Saxon groups from the grave goods than from the skeletons.

Cranial characteristics are nevertheless still valuable in distinguishing between different races, as the examination of the skeletons from North Elmham has shown. There the skull characters from one particular skeleton (Inh.5) suggest that the burial is that of a negress or a woman with predominantly negro genes.[6] Such a find is remarkable and

---

3. See e.g. D.R. Brothwell, Digging up Bones (2nd ed. 1972) p. 87 and fig. 39
4. G.M. Morant, "A first study of the craniology of England and Scotland from Neolithic to early historic times, with special reference to the Anglo-Saxon skulls in London museums" Biometrika 18 (1926) 56-98

unexpected within a late Saxon community in East Anglia, but since its presence is incontestable it is necessary to consider the means by which a negro woman could have reached England.

Although there is no direct evidence, it seems likely that such a woman was held in the position of a slave or captive. The slave trade of early medieval Europe was an extensive one, and included both white and negro slaves. The negro slaves came mostly from West Africa, from the Kingdom of Ghana, which was established between the Senegal and Niger rivers.[7] Its capital, Kumbi, was the largest market in the Sudan, where merchants from all over the Maghreb used to gather. Its wealth was based mainly on gold and slaves, the slaves being obtained by raids on the more primitive bush tribes to the south. The Arabs were much involved in this trade, and the main trading routes went from Kumbi, across the Sahara to Sijilmasa, north to the coast and thence to Spain, or eastwards through Kairwan to the Moslem orient and eventually to Constantinople.

From Moslem Spain there was a steady flow of trade to the Christian states of the north, particularly the kingdom of Léon,[8] and Bautier emphasises the international dimensions of trade of that period by quoting an eleventh century life of Gauzlin, abbot of Fleury.[9] The abbot imported copper from Spain to decorate the stalls of the abbey church, and the

---

5. D. Brothwell and W. Krzanowski "Evidence of Biological differences between early British populations from Neolithic to Medieval times, as revealed by eleven commonly available cranial vault measurements" J. Arch. Sci.1(1974) 249-60
6. Calvin Wells "North Elmham: the human skeletal remains" (in press)
7. E.W. Bovill, The Golden Trade of the Moors (2nd ed. 1970) p. 79-83
8. R.H. Bautier, The Economic Development of Medieval Europe (1971) p. 77

work was carried out by an artist from Lombardy. A marble and porphyry pavement came from Rome, and Arab carpets and silk fabrics from Spain were given to the abbey by the Count of Gascony. A Byzantine artist created a mosaic for the sanctuary, and various other objects came from England and Catalonia.

The evidence for trading contacts suggests that it would have been easy enough for an English merchant to have obtained a negro slave, had he so desired, and to have brought her back to England. Why this negro woman should have arrived at North Elmham rather than anywhere else is a more difficult question to answer, but her presence there is an interesting reflection on the extent and nature of international contacts during the Anglo-Saxon period, and suggests that they may have been more varied and frequent than had previously been realised.

Other features of the skull, known as "non-metrical" variants, can be used to provide genetic and racial information. These are assessed on a present or absent basis, and include such things as metopism, - the persistence of a mid-frontal suture into adult life, or Wormian bones, which are additional sutural bones of the skull. Though the causes of some of these are in doubt the majority are thought to be genetically determined and thus may give some information about family groups within an individual cemetery.

At Jarrow the study of these produced some suggestive findings. Inhumations 70 PL 31 and 70 PK 35 were both women of about 50 and of closely similar physical appearance. In

---

9. Ibid., p. 78

the report on the skeletons[10] Calvin Wells writes:

> "When their non-metrical variants are considered it is found that 70 PL 31 has a double L. hypoglossal canal, 70 PK 35 a double R one; 70 PL 31 has a double L. supra-orbital and infra-orbital foramen, 70 PK 35 has both these foramina double on the right; 70 PL 31 is one of the few Jarrow skeletons with a double mental foramen, on the left, whilst 70 PK 35 has it doubled on the right; and, post-cranially, 70 PL 31 has a R. atlas bridge, 70 PK 35 has a left one. In view of the remarkable "mirror image" distribution of these variants and the other features in which these two skeletons resemble each other there is strong presumptive evidence that these women were not only sisters but also identical twins."

At Iona the whole cemetery group was revealed to have close family relationships because of the incidence of mandibular tori in their skulls.[11] Tori are small bony protuberances or bumps, which occur at four sites in the skull: the external auditory canal, the palate, the maxilla and the mandible. The frequency of torus varies greatly, being found in incidences of between 1 and 5% in Europeans, rising to 40% among Alaskan Eskimos, and 85% in Greenland Eskimos. In 16 complete mandibles which survived from the Iona skeletons torus was present in every jaw, occurring unilaterally in 2 (12.5%) and bilaterally in 14 (87.5%). In nine fragments of jaw torus was found in 8 (88.9%). This 100% incidence in whole jaws and 90% incidence in fragmentary ones is a "wholly exceptional" finding, implying that the Iona population was a closely inbred one, drawing on a narrowly restricted gene pool.

Other genetic and developmental abnormalities which

---

10. Unpublished
11. Calvin Wells (unpublished)

indicate family relationships within a group include such features as sacral spina bifida, detached neural arch of the fifth lumbar vertebra, bifid ribs, sacroiliac synostosis (that is the congenital fusion of the sacroiliac joint), and so on. One or more of these occur at most sites. At the Early Saxon site at Thornham in Norfolk, for instance, 3 cases of sacroiliac synostosis were found,[12] while at Beckford, Gloucestershire another early Saxon site, several individuals had bifid ribs, suggesting close kinship amongst them.[13] On a pagan Saxon site where the burials include grave goods, a knowledge of family relationships derived from the examination of the skeletons might prove invaluable, but unfortunately no detailed skeletal report from a pagan Saxon cemetery has yet been published.

Social Conditions

A study of the skeletons from a site obviously provides far more than information on the physical, racial and genetic affinities of the group. The bones are also modified by disease, by diet, by occupation, and by the subtle influences of social conditions and environment. In considering the state of health of the Anglo-Saxons in general it is thus necessary to consider also the social background and way of life of the period, which affected this equilibrium.

One of the major factors influencing health is the conditions under which people live. This has been a subject of much discussion among archaeologists since there is still some controversy about the types of dwellings lived in by the

---

12. C. Wells, "The radiography of ancient bones" X-ray focus 5 (1964) 2-5
13. C. Wells Bones, bodies and disease (1964) p. 40

Saxons. In the past Anglo-Saxon archaeology tended to concentrate mainly on the excavation of cemeteries, and the growth of settlement studies is a recent phenomenon. The body of evidence available is therefore not large and not necessarily typical.

Early this century E.T. Leeds excavated a settlement at Sutton Courtenay in Berkshire,[14] and found evidence for small huts sunk into the ground. They varied in size and form, but the commonest had two post-holes, presumably supporting a simple ridge pole. These dwellings he suggested were the typical houses of the Anglo-Saxons during the first period of the settlement of England. This view was later criticised by Radford,[15] who pointed out that similar communities on the Continent lived in framed three-aisled long houses, not in squalid huts; and suggested that if excavation techniques were improved evidence for timber framed buildings would be found as well. Since the publication of his article there has been a considerable increase in the number of settlement sites excavated, including two "palace" sites at Yeavering and Cheddar; an episcopal site at North Elmham; rural settlements at West Stow, Mucking and elsewhere; and work in towns such as Winchester and York. Framed buildings of various dimensions have been found on these sites, but as yet no three-aisled long houses have appeared to parallel those found on the Continent at Wijster and elsewhere; and sites such as Mucking have consistently produced sunken featured buildings rather

---

14. E.T. Leeds " A Saxon village near Sutton Courtenay, Berkshire" Archaeologia 72 (1923) 147-92; also Archaeologia 76 (1927) 59-79; and Archaeologia 92 (1947) 79-93
15. C.A.R. Radford "The Saxon house: a review and some parallels" Med. Arch. 1 (1957) 27-38

than timber framed ones.

For the second half of the Anglo-Saxon period there is little doubt that timber halls were the standard dwellings of the majority of the community, but for the early period the situation is still unresolved. Rahtz has suggested that this may be so because the evidence available comes from the extremes of society, the palaces and sunken-featured buildings, rather than from the prosperous farmer of the middle class;[16] and he also points out that the rural settlements which are excavated were those which were abandoned at an early date and did not develop into medieval villages. They are thus "failed" settlements and may not be typical in layout or buildings.[17]

Nevertheless, even if many Anglo-Saxons did live in sunken featured buildings during the early Saxon period, these need not have been particularly cramped or squalid accommodation.

> "In many cases they were clearly spacious and well-appointed residences ... The smallest may have been quite comfortable, even with a sunken floor, as a visit to the Weald and Downland Open-Air Musuem will soon demonstrate." [18]

Rahtz also illustrates as an example a nineteenth century cottage at Athelney which has a sunken floor, and two posts within the sunken area supporting the ridge.[19] This is very similar to excavated Saxon examples, yet the standing building is not the hovel imagined by many excavators, but a sturdy and comfortable dwelling.

Little information about the furnishings of these houses can be derived from the archaeological evidence but the skeletal material is of some interest. Many skeletons

---

16. P. Rahtz "Buildings and rural settlement" p. 52 in D.M. Wilson ed. The Archaeology of Anglo-Saxon England (1976)
17. Ibid., p. 55
18. Ibid., p. 79

are found with "squatting facets", small upward extensions of the antero-lateral aspect of the articular surface at the distal end of the tibia. As the name suggests, these are thought to be caused by squatting, and they occur in various frequencies among different races, being rare in Western Europe today, but very common among populations with whom squatting is a common position of work or rest. The burials from the nunnery at Iona, which date from the 7th-9th centuries, all had squatting facets, a 100% frequency which is unusually high, and perhaps suggests that the community deliberately deprived themselves of chairs and benches as part of a policy of self denial. At the late Saxon settlement at North Elmham squatting facets were also common, being found in 88.0% of the women and 40.5% of the men. At Jarrow the sexual differences were similar, 77.6% of the women and 45.5% of the men having squatting facets. Only at Monkwearmouth did more men have them than women (56.6%♂ to 45.0%♀), and even here the women had larger squatting facets than the men.[20] This sexual difference may partly be cultural, in that in a male-dominated society such as the Saxons were, the men would always have had first claim to any seats that were available; or it may have been occupational, in that the women's tasks involved more squatting than the men. Occupations such as cooking, grinding corn, making pots and so on could have been done in a squatting position, whereas the largely agricultural and more active pursuits of the men would not have been. Nevertheless the fact that a large proportion of both men and

---

19. Ibid., fig. 2.13 p. 78
20. References to the sites at Iona, Monkwearmouth, Jarrow and North Elmham, here and elsewhere in this chapter, are all from as yet unpublished reports on the skeletal material by Calvin Wells

women on all the sites considered had squatting facets suggests that one man, one seat was not the norm in Anglo-Saxon society and that for many people squatting round the fire was probably the normal position of rest at the end of the day.

The hearths in Anglo-Saxon houses seem generally to have been placed in a central position, to judge from literary references such as Bede,[21] and what little archaeological evidence there is;[22] and the smoke from these fires presumably drifted up to the rafters and escaped through the roof. It is difficult to estimate how smoky an atmosphere this created. Recent experiments in living in reconstructed Iron Age halls (in Scandinavia) found that the smoke from the central fire tended to rise and hang in the roofspace, well above the heads of the people inside, provided that the opposed doors at either end of the building were not opened too wide, and created a through draught.[23] Many Saxon houses, particularly the sunken featured ones, were considerably smaller than this, and thus may not have had sufficient head room to avoid the smoke. The occurrence of maxillary sinusitis at some sites suggests this may be the case, since nasal irritation from a smoke filled atmosphere is often a contributory cause of sinusitis, and the relatively large number of remedies in the Leechbooks for sore and inflamed eyes is also suggestive of smoky atmospheres.[24]

At Jarrow there were five cases of maxillary sinusitis among the burials, a mild case in one man, and severe cases in two women and two children both aged about six. Since the

---

21. e.g. H.E. iii, 10
22. Rahtz, op.cit., p. 90
23. Personal communication, Professor Rosemary Cramp
24. e.g. Lbk. I ii, 1-23

women and children are more likely to have been at work indoors than the men, this again implies that the inhaling of smoke may have contributed to the condition. At Monkwearmouth no cases were found, perhaps indicating that the dwellings of the lay population there were better ventilated than at Jarrow. On both sites the cemeteries included burials from the monastic and the lay communities, and thus had a preponderance of males over females. The main conventional buildings of the twin monasteries were large stone built structures, unlike the normal domestic buildings of the period, and this may in part explain the lack of sinusitis in the men, since these large buildings would not have had the same problems of ventilation.

It is possible also that sometimes maxillary sinusitis may be occupational, as for instance the single case among the group of burials at North Elmham. This was a male (Inh.30) who had a chronic sinus infection with a long standing accumulation of pus. Wells has suggested that this may have been caused by his work, such as a smith or pot kiln stoker, or some other particularly dirty or dusty job.

Diet

An adequate diet is vital in maintaining good health and the ability to work effectively, and it is thus of some importance to consider the quality and range of food available to the Saxons. As a society they were mostly involved in agriculture, and individual communities, in the early period at least, were probably largely self supporting. The recently excavated site at Shakenoak in Oxfordshire "was probably typical of many Anglo-Saxon settlements in being surrounded by open ground with some arable crops. Beyond this there

would be sheep and cattle pasture which merged into scrub and mixed-age woodland, and then into the dense primary forest that had changed little since Roman times but which was increasingly cleared throughout the Anglo-Saxon period."[25]

Animal bones from these sites reveal the normal range of domestic animals: sheep, goat, pig, cattle, horse, and so on. The pig was probably the most important in terms of sheer numbers, as well as being the major source of meat, especially in the form of bacon.[26]

The medical texts, particularly the second Leechbook, reveal considerable concern with diet, and often given precise regimens for various conditions, some of which have already been discussed in Chapter Three. A wide range of foods are mentioned. Amongst the sources of meat are cattle,[27] goat,[27] pig,[28] sheep,[29] deer,[27] peacock,[27] swan,[27] duck,[27] geese,[30] pigeons,[28] hens,[28] and hare.[31] The fish include salmon,[32] eels,[30] and various shellfish such as oysters[33] and periwinkles,[33] while the fisherman in Aelfric's Colloquy records that he catches trout, lampreys, eel and pike[34] in the river. Herrings are also mentioned in charters.[35]

Eggs are often prescribed in diets[36] and cheese occurs frequently in foodrents.[37] Fruit and vegetables include apples,[32] pears,[32] peaches,[32] medlars,[38] lettuces,[33] mallows,[33] "worts",[33] peas,[33] beans,[29] and turnips.[29] Various porridges, gruels

---

25. Juliet Clutton-Brock, "The animal resources" p. 374 in D.M. Wilson, op.cit.
26. Ibid., espec. p. 378-389
27. Lbk. II, xvi, 2
28. Lbk. II, xxxvii
29. Lbk. II, xxiii
30. Lbk. I, xxxvi
31. Lbk. II, iv
32. Lbk. II, i
33. Lbk. II, xvi, 1
34. Aelfric's Colloquy (1947) ed. G.N. Garmonsway
35. e.g. No. ix p. 252-3 in ed. A.J. Robertson, Anglo-Saxon Charters (1939)

(Cambridge,)

and broths, and both wheaten and barley bread[39] appear in remedies. A "pullet dressed with herbs" is prescribed for jaundice.[40]

Some of these foods are considered beneficial, while others are to be avoided. A man who has liver disease is to avoid all sharp or windy food:

> "All broth must be foregone because it is inflating and worketh evil humours; eggs must be foregone because their liquor is fat and worketh more heat; crumbs of bread, if they be moistened or sodden, may be eaten, but not in excess; other wet (wheaten) meat-preparations, and cookings up must be forbidden,and all the moist things and greasy, and oyster patties, and all sweet things which work inflation." 41

For someone suffering from "sore of side" (? pleurisy) most of these proscribed foods are efficacious instead.

> "Let the man take light meats and juicy broths, and juicy peas, and beaten eggs, and bread broken in hot water, and periwinkles removed from the shells, with peas." 42

Some food creates "good blood" and is thus to be recommended:

> "Such as are shell fishes, and those that have fins, and domestic and wild hens, and all the fowls which live on downs, and pigeons, that is, the young chicks of culvers, and half grown swine and goats flesh, and juice of peas with honey, somewhat peppered ..." 43

The pregnant woman is also given advice on her diet and behaviour:

> "Earnestly must a pregnant woman be cautioned, that she eat naught salt or sweet, nor drink beer, nor eat swine's flesh, nor aught fat, nor drink to drunkenness, nor fare by the way, nor ride too much on horse, lest the bairn come from her before the right time." 44

---

36. e.g. Lbk II, xvi, 1; xxvi; xlix
37. Robertson op. cit., eg. xx and xxxii
38. Lbk. II, ii, 2
39. e.g. Lbk. II, xvi, 1; xxvi, xlix, xxiii
40. Lbk. III xii, 1
41. Lbk. II, xxiii

Pork is often a forbidden food, being considered a cause of melancholia.[45] This is an interesting prohibition in view of what has been said above about pork and bacon being the most popular meat. However, the regulations about diet are unlikely to have been followed by any except the wealthier classes of society, and probably had little relevance to the average ceorl.

The variety of foods mentioned in the medical texts and elsewhere would certainly have been sufficient to provide an adequate diet, but their availability must have been very seasonal, and the winter was probably always a period of shortages. Some idea of what the Anglo-Saxons themselves considered to be a minimal diet can be obtained from the 11th century text, the Rectitudines Singularum Personarum,[46] which includes the basic provisioning for the slaves on an estate. A male slave is to receive 12 pounds of corn per year and two carcasses of sheep, one good cow and the right of cutting wood. A woman receives eight pounds of corn, one sheep or three pence for winter food, one sester of beans for lenten food, whey in summer, or one penny. Both are given food at Christmas and Easter, a strip of land for ploughing and a "harvest-handful" besides their dues. Individual slaves also receive additional dues related to their specific duties on the estate; for instance, the swineherd is to have a pig in a sty and the perquisites when he prepares the bacon; the cowherd has the old cow's

---

42. Lbk. II, xlix
43. Lbk. II, xxxvii
44. Lbk. III, xxxvii
45. See e.g. the regimen in Oxford St. John's MS 17
46. E.H.D. Vol. II no. 172 p. 813-816

milk for a week after it has calved, and the beestings of a young cow for a fortnight; the goatherd has the milk of his herd after Martinmas, before that a portion of whey, and a kid one year old.

The strip of land would have enabled the slaves to grow some fresh vegetables, and the cow would have provided milk and other dairy produce. Together with the corn and meat, this would supply a reasonably balanced, though probably monotonous diet.

According to Dorothy Whitelock,[47] the "pound" of corn was "the large pound, approximating to a hundredweight". If the provision of corn is divided up into a daily ration it works out at about $3\frac{1}{2}$ lbs of corn per day for a man, and about $2\frac{1}{2}$ lbs for a woman. With this should be compared the rations for a Roman soldier, who also received about three pounds of corn per day, plus bacon, cheese, salt, vegetables, oil and sour wine, and sometimes meat and fruit.[48] The level of provisioning seems not very different. On occasions it was advantageous to be a slave, since their masters were obliged to feed them, and there are records of people selling themselves into slavery in times of famine. In a manumission a woman sets free "the men who gave her their heads to obtain food in the evil days."[49]

Other records of diet come from the monastic rules. According to the rule of St. Benedict:

> "We think it sufficient for the daily meal, whether at the sixth or ninth hour, that there be at all tables two dishes of cooked food, because of the variety of men's weaknesses:

---

47. The Beginnings of English Society (1952) p. 109
48. R.W. Davies, "The Roman Military Diet" Britannia 2 (1971) 122-42
49. E.H.D. Vol. 1 no. 150, p. 563

so that he who may not be able to eat
of the one may make his meal of the other.
Therefore let two cooked dishes suffice
for the brethren, and if there by any fruit
or young vegetables, let a third dish be added.
Let a pound weight of bread suffice for each
day ... If however their work have been greater,
it shall be at the will and in the power of
the abbot, if it be expedient, to make some
addition, provided that excess be before all
things avoided and that no monk suffer from
surfeiting." 50

Not all monasteries were rigorous in keeping to this rule, as is indicated by the Penetentials, which prescribe penances for drunken monks, or those who have made themselves sick through overeating,[51] but abstinence in food always remained one of the tenets of the monastic life.

In general meat was only allowed to the oblates of the monastery, and to the invalids. In Aelfric's Colloquy[52] the young monks are asked what they eat, and reply, "meat, also herbs and eggs, fish and cheese, butter and beans". They drink "ale, if I have it, or water if I have no ale". Wulstan, bishop of Worcester at the time of the Conquest, had a similar diet, though abandoning the meat he had eaten in his earlier years.

> "There were set before him fish and sauces, milk, cheese, and butter, whereof he sometimes partook; but more gladly ate only herbs ... After dinner, when the rest had ale or mead set before them to drink, as is the English custom, Wulfstan would drink pure water, though only his servant knew it, and others supposed it was some more costly brewage. All his earlier years he drank only water; when he grew old he mingled with it some ale or wine." 53

Such a diet was considered frugal for the late Saxon

---

50. The Holy Rule (1958) H. Van Zeller ch. 39 De mensura ciborum
51. e.g. Penitential of Theodore in Haddan + Stubbs, op.cit.
52. Aelfric's Colloquy ed. G.N. Garmonsway (1947)
53. William of Malmesbury, Life of St. Wulstan, Bk. III, 2, trans. J.H. Peile (1934)

(Oxford,)

period, though compared with the amounts eaten by earlier saints it was sumptuous indeed. Guthlac, for instance, ate nothing but a scrap of barley bread and a small cup of muddy water each day after sunset;[54] while Cedd had a small quantity of bread, one hen's egg, and a little watered milk throughout the period of Lent.[55]

The emphasis of the monastic diet was on herbs and vegetables rather than animal products, and some idea of the different vegetables availabe to the Saxons can be gained from one of Aelfric Bata's Colloquies,[56] which gives a list of the trees and herbs grown in the monastic garden. The following herbs are cooked and eaten daily (cotidie mandi possunt, si erunt cocta): caula, kale; petrocelinum, parsley; malva, mallow; cerpillum, chervil; apium, celery; algium, garlic; menta, mint; anetum, dill; saturegia, savory. Other herbs mentioned, which were probably eaten for food as well as used medicinally, include cress, parsnip, radish and turnip.

A longer list of vegetables occurs in the ninth century plan of the monastery of St. Gall, where each plot in the kitchen garden is labelled with the name of the vegetable to be grown in it. They are: cepas, onions; alias, garlic; porros, leeks; ascolonias, shallots; apium, celery; petroselinium, parsley; coliandrum, coriander; cerefolium, chervil; anetum, dill; lactuca, lettuce; papaver, poppy; saturegia, savory; radices, radishes; pastinacas, parsnips; magones, carrots; caulas, cabbages; betas, beet; gitto, ? corncockle.

Both sources include much the same herbs, and the emphasis is on strongly flavoured and oniony vegetables, particularly at St. Gall. The last plant in the list, gitto

---

54. Felix's Life of St. Guthlac ed. B. Colgrave (1956) ch. 28
55. H.E. III, 23
56. W.H. Stevenson ed. Early Scholastic Colloquies (1929) Colloq. iv p. 58-9

is translated by Willis[57] as corncockle, which seems a rather unlikely identification, since corncockle has always been regarded as a troublesome weed among corn. As Gerard remarked, "What hurt it doth among corn, the spoile of bread, as well in colour, taste, and unwholesomnesse, is better knowne than desired".[58] In Leechbook II, however, a "southern wort" called gitte is referred to, "which is good to eat on bread",[59] and it may be that this (unidentified) herb is the one included in the St. Gall garden.

Some of these vegetables, particularly the root vegetables such as carrots, parsnips and so on, could be stored and eaten through the winter, but the lack of green vegetables may have meant that some at least of the population suffered from vitamin C deficiency during those months. The Saxons themselves seem to have been aware of this danger, for in Leechbook III a man is urged to eat

> "beet, and mallow, and brassica, or cabbage, and the like to these, sodden together with young flesh of swine; let the man swallow the broth: and also nettle sodden in water and salted is good to swallow; and also leaves of elder and the broth in the same wise ... Drinks like these and more powerful ones if need be, are to be administered especially in early spring, before the evil humour which is collected in winter, spread itself through the other limbs." 60

All these green herbs would have helped counter the effects of mild scurvy; young nettles particularly being still used as a blood purifier.[61] Pepys refers to eating nettle pudding in his Diary for February 1661: "We did eat some Nettle porridge, which was very good", and in the

---

57. R. Willis, "Description of the ancient plan of the monastery of St. Gall in the ninth century", Arch. J. 5 (1848) 85-117
58. Gerard's Herball ed. M. Woodward (Reprint 1974) p. 252
59. Lbk. II, xxxix
60. Lbk. II, xxx

Lake District it was the custom to eat Easter Ledger Pudding, which included Bistort, dandelion, Lady's Mantle, and nettle, on Easter Day, also as a means of providing some spring greens.[62]

There is little evidence of scurvy from surviving skeletal material, partly because it is difficult to identify.

> "It is not an easy disease to recognise in skeletal remains because its chief features are swollen, spongy, infected gums, and multiple subcutaneous and perifollicular haemorrhages, giving rise to extensive purpuric and ecchymotic areas, anaemia, lassitude, and loss of muscle tone, and a tendency to sudden death on slight exertion. Since these are all manifestations which affect soft tissues rather than bones, it is understandable that its palaeopathological recognition is very rare." 63

It is sometimes possible to diagnose scurvy from dental changes or organised haematomata of the long bones, and Wells has found tentative indications of it in 7(2%) of 350 Anglo-Saxons from East Anglia.[64] Even so, there is nothing in the documentary or the medical sources to parallel the descriptions of scurvy in, for instance, Hakluyt's Principal Navigators (1600), and there seems no real reason to assume that the Anglo-Saxons were any more prone to scurvy than the populations of later centuries, up to quite recent times.

Deficiencies of other vitamins such as A, B and D are unlikely to have occurred, since although vitamin A is found in green vegetables, enough is stored in the liver to last for many months, when fresh vegetables or dairy produce are not available. The vitamin B group occur mainly in cereals and pulses and the deficiency diseases, such as beriberi and pellagra

---

61. Grieve, p. 577
62. Grigson, p. 249
63. Calvin Wells, "Prehistoric and historical changes in nutritional diseases and associated conditions". Progress in food and nutrition science 1 (1975) 756
64. Ibid., p. 757

are not common in Western Europe where the staple diet includes a wider range of cereals than elsewhere. Vitamin D is absorbed from the ultra violet light in sunlight. Its lack causes rickets, which is thus "a disease of dark, smoky cities, of gloomy alleys and windowless habitations", and it is virtually non-existent among the Saxons where the urban population was small and relatively uncrowded.[65]

Periods of starvation and disease in childhood can be detected by the appearance of Harris's lines in the diaphysis of long bones. These are transverse lines, previously thought to be lines of arrested growth, which can be seen on X-rays of the bones. By measuring the distance of the individual lines from the end of the bone it is possible to estimate the age at which the particular incident which caused it occurred, and by comparing the average number of lines from different communities one can gain an impression of the relative health of the various groups.

There are, however, problems in the interpretation of these lines. Originally they were thought to be permanent,[66] but recent work with modern children suggests that they are often resorbed, and that it is difficult to relate the lines to specific periods of illness.[67] The number of lines surviving in adults is thus not a complete record of the periods of starvation or ill health from which they have suffered.

Greulich and Pyle also found that undernourished

---

65. Ibid., p. 752-4
66. Calvin Wells, "A new approach to ancient disease", Discovery 22 (1961) 526-31
67. W.A. Marshall "Problems in relating the presence of transverse lines in the radius to the occurrence of disease" in The Skeletal biology of earlier human populations (1968) ed. D. Brothwell

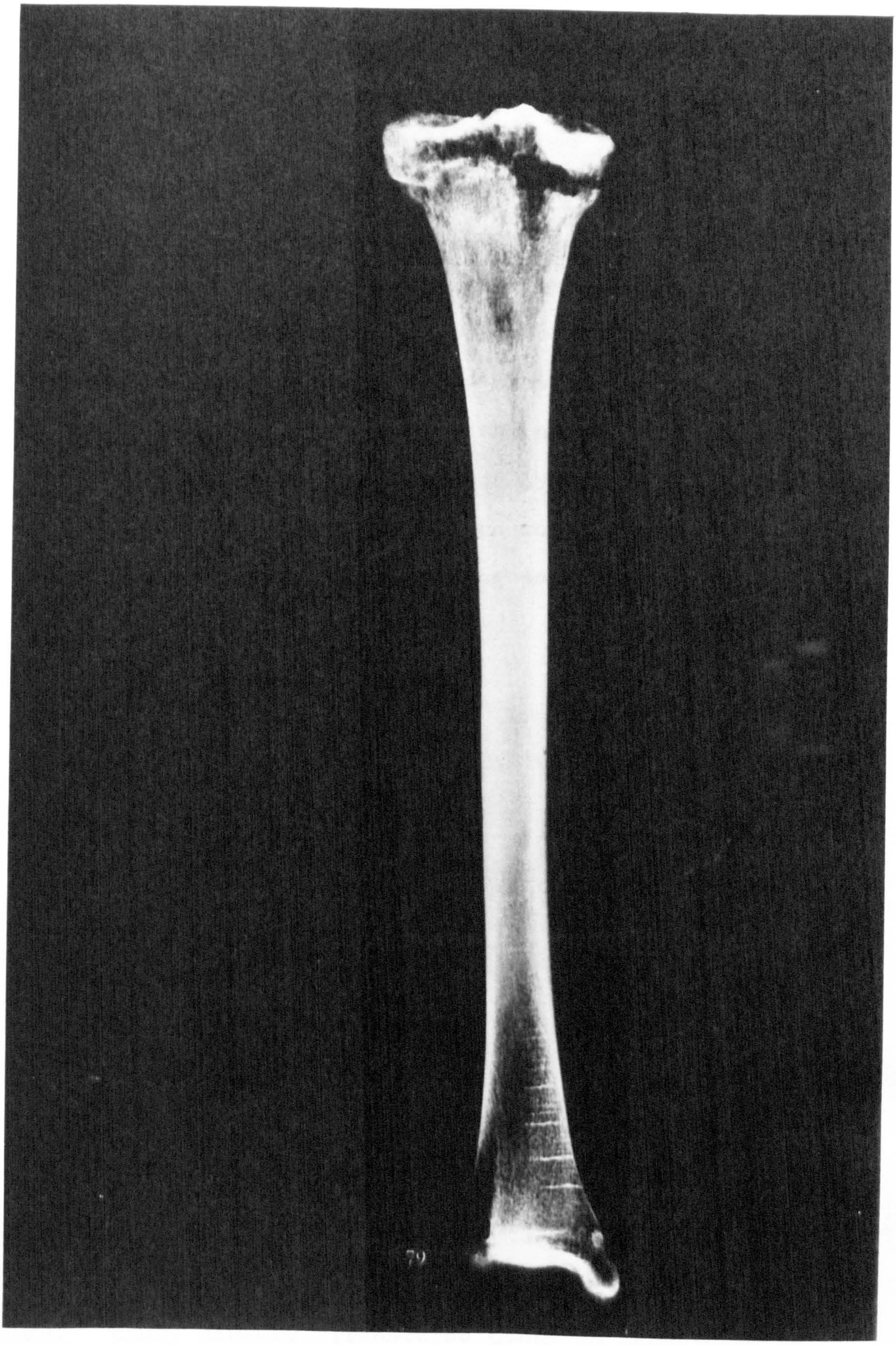


Plate 22. Radiograph of a tibia showing a series of Harris's lines at the lower end. (From Calvin Wells, Bones, bodies and disease (1964), plate 79)

children in Alabama only developed Harris's lines after their diet had been supplemented with reconstituted dried milk.[68] This means that a community suffering from chronic malnutrition may not show as many lines as one suffering periodic acute starvation followed by periods of good nutrition.[69] Nevertheless, if one assumes that lines are reabsorbed at a consistent rate, and has some knowledge of the economy of the various groups involved, it seems reasonable to assume that populations showing large numbers of lines are less healthy and well fed than those showing few lines.

Calvin Wells has counted the number of Harris's lines from various skeletal groups, mostly of the Anglo-Saxon period. The results are based on radiographs of the tibia, and are included in the following table.

---

68. W.W. Greulich and S.I. Pyle, Radiographic Atlas of Skeletal Development of Hand and Wrist (2nd. ed. 1959) Stanford, Calif.
69. Henry McHenry "Transverse Lines in Long Bones of Prehistoric California Indians", Amer. J. Phys. Anthrop. 29 (1968) 1-18

Table 9.1: Average number of Harris's Lines per person

Site	Description	Number in Sample	Av. No. of lines per bone	% persons with lines
Crichel & Shrewton (Dorset)	Bronze Age Barrows, probably pastoralists	17	0.8	50.0
Martyr's Bay (Iona)	7-9th century nunnery		0.9	53.8
North Elmham (Norfolk)	Late Saxon	55	1.1	
Shouldham (Norfolk)	12-15th century Gilbertine Priory	23	1.6	40.0
Red Castle, Thetford (Norfolk)	Late Saxon Poss Frisian in origin	42	1.8	57.2
Eriswell (Suffolk)	Early Saxon	34	2.1	67.6
St. Catherine, Thorpe (Norfolk)	Saxon	45	2.2	66.7
Burgh Castle (Suffolk)	Middle Saxon	225	2.6	73.3
Thornham (Norfolk)	Early Saxon	36	3.4	77.5
Caister-on-Sea (Norfolk)	Middle Saxon	139	5.1	89.3
Hungary	Modern pop. (Bugyi)	600	0.86	33.0

As can be seen, the average number of lines per bone varies considerably, even among populations of the same date. For comparison, the figures for a modern Hungarian population are also given. The average number of lines is small, but Bugyi found that the age group with the greatest number of lines were those aged between 30 and 40, that is, the group born during the war, when food shortages and other hardships meant they had a more traumatic childhood.[70] This suggests, as mentioned before, that though the surviving Harris's lines represent only a fraction of the episodes of illness or starvation which occurrred, they do reflect the relative state of health of the various communities considered.

The lines appearing in adult bones all reflect adverse episodes in childhood from which the individual made a successful recovery. Even so, one might expect that populations which suffered a large amount of childhood illness would grow up to be less healthy adults, and might therefore die younger than other groups. Table 9.2 compares the average age at death with the average number of Harris's lines found in seven different communities.

There appears to be no close correlation between the age at death and the average number of lines, except at the extremes. Red Castle, Eriswell, and St. Catherine, Thorpe all have a lower average age at death than the Caister population, in spite of the fact that Red Castle has only one third as many lines and Eriswell and St. Catherine both have less than half as many lines. The reason for this is not clear, but it suggests that the health of the adult

---

70. B. Bugyi "About the transversal sclerotic lines of the long bones of the extremities" Anthropologie 11 (1973) 101-4

Plate 23. Two Anglo-Saxon incisors and a medieval canine, showing the results of enamel hypoplasia. (Enlarged).
(From C. Wells, "A new approach to Palaeopathology: Harris's lines," fig. 9, in D.R. Brothwell and A.T. Sandison eds. Diseases in Antiquity (Springfield, 1967))

Table 9.2 Average age at death (both sexes combined)[246] compared with average number of Harris's lines per bone

Site	Av. no. of lines per bone	Average age at death
Martyr's Bay, Iona	0.9	41.4
North Elmham	1.1	37.0
Shouldham	1.6	39.2
Red Castle, Thetford	1.8	33.9
Eriswell	2.1	29.7
St. Catherine, Thorpe	2.2	34.1
Caister-on-Sea	5.1	34.5

community at Caister was not permanently affected by their more sickly childhood.

This is a somewhat unexpected conclusion, since adequate nutrition in childhood is of great importance to the healthy growth of bones and teeth. During the development of the teeth malnutrition or disease can cause ridges, pitting or other defects in the enamel, known as "enamel hypoplasia". In modern jaws this usually occurs during the first years of life, whereas among the Anglo-Saxons the canines and the second molars are the teeth most often affected indicating that the periods of morbidity occurrred between the ages of two and four years. Wells has suggested that in some cases this may be due to nutritional disturbances associated with weaning.[71]

The kind and quality of food eaten has many effects on the teeth. Most Saxon dentitions show heavy wear, indicating that the food eaten was coarse and probably gritty (from stoneground flour for instance), and required much chewing. A tough diet is again suggested by the high incidence of

---

71. Calvin Wells "Prehistoric and historical changes in nutritional diseases and associated conditions", Progress in food and nutrition science 1 (1975) p.749

arthritis found in the jaw. At Red Castle 7 (25%) of 28 skulls have temporomandibular osteoarthritis, while at North Elmham 17% of jaws were affected. Here there was also a marked sexual difference, for of the 10 arthritic jaws, eight were female and only two were male. This partly reflects the relatively lighter female jaw, but it may also imply that women took second best as far as food was concerned.

In contrast to Red Castle and North Elmham, no mandibular arthritis was found at Monkwearmouth, and at Jarrow only 3 (1.9%) of 152 jaws had arthritis. Though these are both monastic communities they include many of the local population in their cemeteries, so their relatively more palatable diet is not due simply to monastic privilege; but in general these two Northumbrian communities seem to have led physically less demanding, better fed, and comparatively more healthy lives than the other Saxon communities in East Anglia.

The consistency of food eaten, whether raw or cooked, bland or coarse, also affects the rate of dental caries shown by a population. The precise causes of caries are not yet fully understood but the consumption of sugar is thought to be important. Since the only sweetening agent available to the Saxons was honey it is not surprising that their caries rates are relatively low, though there is still considerable variation between sites.

Table 9.3: Dental Caries rates

Site	Date	Author	No. teeth examined	% carious
England	Romano-British	Emery[72]	870	11.4
England	Early Saxon	Hardwick[73]	959	8.1
England	Saxon	Tattersall[74]	1,735	5.6
Iona	7th-9th c.	Wells (unpub)	463	0.4
Monkwearmth	Mid Saxon	Wells (unpub)	688	0.4
Red Castle	Late Saxon	Wells[75]	638	1.5
Jarrow	Mid Saxon	Wells (unpub)	1,174	2.8
N. Elmham	Late Saxon	Wells (unpub)	1,577	6.4

In comparison with the Romano-British group included, all the Saxon sites show low rates of caries though there is considerable variation between them. The range is from Iona and Monkwearmouth with rates of only 0.4% to Hardwick's early Saxon group with a rate of 8.1%. It is not easy to explain these differences, though the small number of caries at Monkwearmouth and Iona may be partly due to the fact that they were both monastic communities, and thus included fish rather than meat in their diets. Fish contains fluorine, which is thought to be an important factor in preventing dental decay, and the teeth of the Monkwearmouth and Iona populations may therefore have been better protected than other groups.

At Monkwearmouth fluorine also occurs naturally in the water,[76] and this would explain why the community there has

---

72. G.T. Emery "Dental pathology and archaeology" Antiquity 37 (1963) 274-81
73. J.L. Hardwick "The Incidence and distribution of cavies throughout the ages in relation to the Englishman's diet", Brit. Dent. J. 108 (1960) 9-17
74. I. Tattersall "Dental Palaeopathology of medieval Britain" J. Hist. Med. 23 (1968) 380-85
75. C. Wells "Report on the human skeletons from Red Castle, Thetford", Norfolk Arch. 34 (1967) 155-86
76. From information supplied by Professor Rosemary Cramp

a lower caries rate than the one at Jarrow which followed the same rule, and presumably ate much the same diet.

The true rate of caries must be rather higher than it appears in the table, since the antemortem loss of some teeth was probably due to caries, which cannot now be recorded. Other causes of tooth loss include an abrasive diet leading to pulp exposure and alveolar abscesses which loosen the tooth in the gum; or the accumulation of tartar around the teeth, which again causes alveolar infection. The following table shows the amount of antemortem tooth loss from various sites.

Table 9.4: Antemortem tooth loss

Site	Author	Poss. no. of teeth	No. lost antemortem	% lost
Iona	Wells (unpub)	492	24	4.8
Monkwearmouth	" "	997	73	7.3
Jarrow	" "	1643	131	7.9
North Elmham	" "	2506	272	11.1
Red Castle	Wells[77]	856	136	15.9
Britain 5th-10th c.	Wells (unpub)	6427	1099	17.1

It can be seen from the table that with the exception of Red Castle, the amount of antemortem tooth loss bears some relationship to the amount of caries in the teeth, though this probably just reflects the general level of oral health in the individual community. The importance of lost teeth should be stressed, since the loss of upward of 10% of the teeth (which appears not to be unusual in many Saxon groups) may prove quite a disability when trying to eat a diet which requires vigorous chewing. And failure to consume adequate amounts of food affects all other aspects of health, as has been emphasised before.

---

77. Calvin Wells, op.cit.

Hygiene

It often seems to be assumed that during the Saxon and medieval periods general levels of cleanliness were extremely low, and that everyone was both verminous and smelly. The Benedictine Rule is quoted in support:

> "Let the use of baths be granted to the sick as often as it shall be expedient, but to those who are well and especially to the young, baths shall seldom be permitted." 78

This view is rather an oversimplification, for the point of the Benedictine Rule is surely to deny baths to those who would prefer to have them, as a deliberate penance; and many saints such as Cuthbert,[79] and Ethelthryth[80] did not wash for long periods as part of a policy of self denial, not as normal practice. Wilfrid washed every day in holy (and presumably cold) water until advised by the Pope to forgo such rigours on account of his age,[81] and it seems to have been general practice when bishops[82] and kings[83] were dispensing charity to poor men or others, to provide the beneficiaries with a hot bath as well as with food. Baths were thus not such rarities as supposed.

One of the problems with bathing was to ensure adequate supplies of hot water, a problem solved by the Saxons by the use of steam baths or stone baths. Hot stones were placed in a trough, and water thrown over them, the prospective bather sitting on a stool in the resultant steam. Baths like these are frequently prescribed in the medical texts, as already discussed in chapter four.

Even so, it is certainly true that standards of personal

---

78. ch. 36, trans. H. Van Zeller, The Holy Rule (1956) p. 244
79. V.P., 18
80. H.E. iv, 19
81. Eddius, Life of Wilfrid, 21
82. e.g. William of Malmesbury, Vita Wulstani ed. R.R. Darlington (1928) II, 7

cleanliness were not as high as today, and the Leechbooks contain many remedies for skin diseases caused or encouraged by dirt and infrequent changes of clothes. The conditions described include scabby body,[84] blotch,[85] oozing blains,[86] fellons,[87] itching belly,[88] lice,[89] and various worms, such as small worms,[90] handworm,[91] dew worms,[91] boring worms,[92] inward worms,[93] and the Ons worm.[94] Not that these are now extinct conditions (except perhaps the Ons worm?).

Bede tells the story of a dumb youth who appears to have been suffering from ringworm:

> "He had so much scabbiness and scurf on his head that no hair could grow on the crown save for a few rough hairs which stuck out around it." 95

The boy was taken in by John of Beverley, who succeeded in teaching him to speak, and then:

> "ordered the physician to undertake to heal his scabby head. He did as he was bidden and, with the help of the bishop's blessing and prayers, his skin was healed, and he grew a beautiful head of hair. So the youth gained a clear complexion, ready speech, and beautiful curly hair, whereas he had once been ugly, destitute and dumb." 96

A rather similar account occurs in the Life of Wulstan where a man suffering from what William of Malmesbury describes as the King's Evil, came to Wulstan in the hope of being healed. A cure was effected, without the bishop's knowledge, by pouring the water in which he had washed his hands into

---

83. e.g. Life of King Edward ed. F. Barlow (1962) II, 1
84. Lacn. xxxv
85. Lbk. I, xxxii
86. Lbk. I, xxxix, 3
87. Lbk. I, xxxix, 3
88. Lacn. cxxix
89. Lacn. cxxx, cxxxvi-cxxxix; Lbk. I, lii
90. Lbk. I, xlix
91. Lbk. I, l
92. Lbk. I, liii
93. Lbk. III, xxiii, 1, 2
94. Lbk. I, xlvi

the sick man's bath:

> "The leper went into the water frightful to behold; his flesh full of sores. But O wonder, straightway the swelling boils went down, the deadly matter ran away: and in a word, his flesh came again as the flesh of a little child. Even the scabs and blains on his head were banished, and his hair grew again thick and comely." 97

Not surprisingly skin diseases are rarely identified from skeletal material, though Calvin Wells has tentatively diagnosed two cases of infection of the scalp in skeletons from Jarrow. One is in a male (inh. 67 NN 32) and the other a female (70 PP 26). The woman,

> "had a low-grade periostitis and osteitis with pitting, roughness and slightly raised striate lesions of both parietal bones ... a strong possibility would be that this woman had extensive ulceration as a result of scratching and picking among the roots of louse infected hair ... Long tangled tresses, unwashed and uncombed, may harbour a population of several thousand vermin big enough to be seen with an unaided eye. Within the past decade a young woman who sought to preserve (for several weeks) an elaborate hair-do to enhance her elegance, was found to be giving refuge to several dozen cockroaches."

The man had similar lesions slightly to the left of the frontal bone, and on the left parietal, probably also associated with an infection of the pericranium and scalp. The cause may be the same as that suggested for the woman, or alternatively, "a primarily septic condition such as a carbuncle or an infected sebaceous cyst."

The remedies in the medical texts against lice consist of drinks as well as salves. An example is:

---

95. H.E. v.2 "sed et scabiem tantam ac furfures habebat in capite, ut nil umquam capillorum ei in superiore parte capitis nasci valeret; tantum in circuitu horridi crines stare videbantur."
96. Ibid.
97. Life of St. Wulstan II, 8

"Against lice: pound in ale oak
rind and a little wormwood, give to drink." 98

Of the two salves prescribed, one consists of quicksilver and butter mixed in a brazen vessel, and the other of hemlock, wormwood and rosemary, also mixed with butter.[99]

Body lice as well as head lice appear to have been common, since Aelfhere, the ealdorman who buried the body of the murdered King Edward the Martyr noted that it was covered in lice.[100]

Occupational disorders

Many illnesses or ailments are caused by or related to occupation. At the simplest level these may be minor disorders such as tennis elbow or house-maid's knee; or more seriously, diseases such as pneumoconiosis or asbestosis suffered by miners and workers in asbestos factories.

Since the Anglo-Saxons were primarily engaged in the production of food, many of the ailments from which they suffered reflect their agricultural life and the heavy labour it involved. An impression of the routine of the agricultural year may be gained from an eleventh century tract called Gerefa, which comments on the duties and functions of the reeve of an estate. The reeve is responsible for supervising the general running of the estate throughout the year. In summer, that is in May, June and July, the men must harrow, spread out dung, make good the hurdle-hedges, sheer sheep, build and construct, make good the fences and buildings, cut wood, clear the ground of weeds, build sheep pens, make fish-weirs and water-mills. At harvest-time they

---

98. Lbk. I, lii
99. Lbk. I, lii; Lacn. cxxx
100. Wm of Malmesbury, Gesta regum Anglorum II, 9

reap, mow, dig up woad, take home many good things, roof and thatch, clean out the fold, arrange the sheep-pen and pig-sties before the hard winter comes, and zealously follow the plough. In winter they plough and in a great frost cut timber, prepare the orchards, do many indoor jobs, thresh, cut wood, make a stall for the oxen, sties for the pigs, make a kiln on the threshing floor. In spring there is more ploughing and planting of young trees. Beans are sown and vineyards set. Ditches are made and hedges hewn against wild beasts. When the weather is favourable madder is planted and linseed and woad are also sown. Vegetables are to be planted and many other things.[101]

The tract is concerned with the general running of the estate, and it therefore says little about the livestock, except in the provision of sheepfolds etc, or about the different crops sown on the land. Some of the duties described probably would not have been necessary every year, but even so the impression given is one of continuous and heavy labour.

This is reflected in the frequent occurrence of arthritis among the Saxons, a disease thought to be caused mainly by constantly repeated minor trauma, and the stresses and strains imposed on the joints. It leads to the degeneration and erosion of the cartilage covering the bone, and to destruction or proliferation of the bone itself. An associated condition is osteophytosis, in which jagged outgrowths of bone occur in the limb joints or between the vertebrae. Vertebral osteophytosis is also caused, at least in part, by continual straining of the back, in lifting and carrying heavy loads

---

101. F. Liebermann, Die Gesetze der Angelsachsen (1903-16) Vol. I, p. 453-5; paraphrase in H.R. Loyn, Anglo-Saxon England and the Norman Conquest (1962) 193-4

Plate 24. Part of the spine of an Anglo-Saxon skeleton from Burgh Castle, showing the vertebrae fused together into a solid mass by osteophytosis. (From Calvin Wells, Bones, bodies and disease (1964), plate 24)

for instance. In severe cases several vertebrae may fuse into a single, rigid column known as "poker" spine, and examples of this have been found on Saxon sites such as Burgh Castle.[102]

The spine is also the area most frequently attacked by osteoarthritis, though the shoulder, elbow, wrist and lower limbs are commonly affected as well. The incidence and severity of arthritis varies from site to site, but on some, such as Red Castle, it is more or less universal, particularly among adults over the age of thirty.

> "The total impression given by these ... conditions is one of gross disability in the group as a whole, with rapidly increasing rigidity and limitation of movement amongst most of the older members." 103

At North Elmham arthritis was also common, though the men suffered more severely than the women. This pattern was repeated at Monkwearmouth and Jarrow, though the overall incidence of arthritis was much lower on these sites, only about a quarter (26.3%) of 83 males and 57 females being affected at Jarrow, and a similar number at Monkwearmouth.

There are a number of references in the literary sources to people suffering from paralytic conditions, which may well be arthritic in origin, though it is difficult to identify them precisely. Cudda, a nobleman and retainer of King Ecgfrith decided to join the monastic community at Lindisfarne because of his increasing paralysis,[104] and at Barking there was a nun who for many years "had been so disabled that she could not move a single limb" and who suffered "cruel tortures" from the pain.[105] A woman who lived near Worcester was

---

102. C. Wells, Bones, bodies and disease (1964) pl. 24 and p. 265
103. C. Wells, "Report on the Human Skeletons from Red Castle, Thetford" Norfolk Archaeology 34 (1967) 161
104. Eddius, Life of Wilfrid, ch. 2
105. H.E. iv. 9

attacked by a disease "which seized not only on one member, but on every limb, and stiffened and knotted all her joints. Day by day she grew worse and was forced to keep her bed".[106] She also suffered severe pain, but was eventually cured by the good offices of Bishop Wulfstan. The pain, stiffness and rigidity of the joints described in the accounts of the two women could well be descriptions of arthritis, though other conditions such as Paget's disease or Parkinson's disease are also possible identifications.

The occurrence of arthritis reflects the regular wear-and-tear of joints caused by a rigorous and energetic way of life, and it cannot be related to any one specific occupation or activity. Some other medical conditions, however, do have a more precise link with occupation. One of these is a form of bursitis, known as "weaver's bottom", which leads to roughening and irregularities of the ischial tuberosities, at the point where a bursa underlies the tendon of the hamstring muscles. It is not limited only to weavers but to any activity which involves what Calvin Wells describes as "traumatic sitting". This would include coachmen, waggoners, bargees, rowers and so on.

Two cases were found at Jarrow, both in males (inh. 67 GX 1 and 67 MD 19), and one case at North Elmham, in a woman (inh. 127). Unfortunately it is not possible to say which of the above occupations caused these particular cases.

Another male skeleton at Jarrow (67 PH 46) has an exostosis on the left femur at the site of insertion of the Adductor longus muscle. This type of lesion is known as a "rider's bone", and is usually caused by a violent contraction and

---

106. Life of St. Wulstan II, xiii

tearing of the muscle in an effort to remain in the saddle when falling off a horse. It was probably some such accident which caused this man's injury, and suggests he was a regular horseman.

Falls and accidents of one sort or another were a common mishap, as indeed they still are, and accounts of accidents make up the largest single group (apart from mental disturbances) of injuries and ailments described in the literary sources. Many of these are building accidents. Ethelwold narrowly escaped death during the building of the monastery at Abingdon. He was struck by a falling timber, and was only saved from being crushed by falling into a pit which partially protected him. Even so he broke all his ribs on one side.[107] A monk at the same monastery fell off the roof, but survived miraculously unscathed.[108]

At Hexham a boy was not so lucky. He also fell from the roof during its construction and broke both arms and legs; but was eventually cured due to the prayers of the brethren and the attention of the physicians.[109] A mæson named Ermer suffered a similar fate at Worcester:

> "For not long after, the scaffold brake on which this same workman was standing to lay stones, and a sore evil befell him that never left him; for he was lamed in both his legs. For a year he lay upon his bed, and never again walked like a whole man." 110

Other people fell from horses and injured themselves. Herebald, one of John of Beverley's monks, cracked his skull and broke his thumb when his horse stumbled and threw him during a race;[111] while the servant of a thegn at Winchester broke an arm and a leg in a fall from his horse.[112]

---

107. Aelfric's Life of St. Ethelwold, II in Chronicon monasterii de Abingdon ed. J. Stevenson
108. Ibid., 23
109. Eddius, Life of Wilfrid, 23

The most unfortunate of all these casualties was a laybrother from one of abbess Aelfflaed's estates, who fell out of a tree while gathering fodder for the sheep. His injuries proved fatal, and he died the same night.[113]

Fractures are easily recognised in skeletal material and they are found on all sites. The commonest fractures are those of the leg, often associated with a Colles' fracture of the wrist, - that is, a person falls and breaks a leg and in trying to save himself puts out a hand and breaks the wrist as well. The frequency of fractures varies from site to site. At Red Castle for instance, 14% of the surviving fibulae were fractured, whereas at Jarrow the figure was only 3.7%. This again bears out the view, mentioned earlier, that life in the two Northumbrian monasteries was much less rigorous than in East Anglia.

It is not always possible to suggest a cause for the various fractures which occur, but at Monkwearmouth a skeleton was found with a pattern of fractures which suggested that they might have been caused by a building accident similar to those described in the literary evidence.[114] The skeleton, that of a man aged between 50 and 65 years, has two fractures of the right side of the pelvis, and a fractured left femur. All the fractures are soundly healed, though the right innominate bone is fused with the sacrum, and the

---

110. Non enim multo post idem pontifex, confractis machinis super quas ad liniendam materiam stabat; miserabilem semperque sibi duraturam erumpnam incurrit, ambo crura debilitatus. Et quo quidem anno cubili accumbit; sed numquam tota vita pedes non doluit. Wm. of Malmesbury, Vita Wulstani II, 16 ed. R.R. Darlington (1928)
111. H.E. v.6
112. Aelfric, Lives of the Saints Vol. 1, xxi ed. W.W. Skeat E.E.T.S. (1881-1900)
113. V.P. 34
114. Calvin Wells "Une fracture rare chez un ancien Anglo-Saxon" Helenium 15 (1975) 237-243

Plate 25. The fractured pelvis from the Monkwearmouth skeleton, showing the fusion of the right innominate bone with the sacrum and the resulting displacement of the hip. (From C Wells, "Une fracture rare chez un ancien Anglo-Saxon", Helinium 15 (1975) fig. 5)

two halves of the femur have been displaced so that the bone is considerably shortened. This combination of fractures could easily have been caused by a fall from some height on to the hard ground, in just the same sort of manner as the boy from Hexham. In spite of the severity of the injuries, the man survived for some years after this accident, though crippled. Like Bothelm, he doubtless had the prayers of the brethren and the attentions of the physicians to thank for his recovery.

Many fractures, though well healed, show displacement and overlapping of the bones. This is due to the muscle spasms associated with the fracture, which hold the bone rigid and which were very difficult to relax until the development of anaesthetics and the extensive use of traction. That the Anglo-Saxons were aware of this problem and made some attempt to remedy it is indicated by a passage in Leechbook I dealing with the treatment of a broken leg:

> "In the case of many a man, his feet shrink up to his hams, work baths, add tares and cress and small nettle and beewort, put hot stones well heated in a trough, warm the hams with the stone bath; when they are in a sweat, then let him, the patient, duly arrange the bones as well as he can, apply a splint, and it is so much the better the oftener a man bathes with the preparation." 115

Elsewhere a salve is prescribed made of pounded bonewort and white of egg. This is laid on the broken limb and covered with elm rind; a splint is then applied, and the limb bandaged. The salve is to be renewed regularly until the bone has healed.[116] Remedies also occur for broken heads, for which betony is particularly efficacious.

---

115. Lbk. I, xxvi
116. Lbk. I, xxv, 2

Plate 26. A fractured tibia and fibula. The broken bones have been displaced and have healed in an overlapping position, with the result that the left leg must have been considerably shorter than the right. (From Calvin Wells, Bones, bodies and disease, (1964) plate 21)

If the fracture of the skull is sufficiently serious to have exposed the brain:

> "take the yolk of an egg and mix a little with honey and fill the wound and swathe up with tow, and so let it alone; and again after about three days syringe the wound, and if the hale sound part will have a red ring about the wound, know thou then that thou mayest not heal it." 117

In spite of this warning a high percentage of fractures of the skull seem to have healed with few signs of inflammation, and the evidence of healed trephinations from several sites in East Anglia suggests that the Anglo-Saxons were fully competent to deal with holes in the skull.[118]

Even so, the healing of a fracture did not necessarily mean the full use of the limb was restored, as the story of Ermer the mason suggests. Many people must have been left with limps, or otherwise deformed and foreshortened limbs which would have resulted in considerable disablement. The cripples so often referred to in saints' lives such as Aelfric's Life of St. Swithun,[119] are probably in many cases suffering from the aftermath of fractured bones. Today a fracture unless complicated, is usually only a temporary handicap, and it is easy to forget that in the Saxon period it often caused major and permanent disabilities.

Other diseases

In addition to pointing out the general pattern of disease and injury afflicting any group, the examination of skeletal material can also help confirm the identification of diseases tentatively suggested in the documentary evidence

---

117. Lbk. I, i, 15
118. Calvin Wells, "Probable trephination of five Early Saxon skulls", Antiquity 48 (1974) 298-302
119. Aelfric, Lives of the Saints Vol. 1, xxi ed. W.W. Skeat E.E.T.S. 1881-1900

or it can identify diseases not known to have existed at that time, or conditions which occur only in rare cases.

For instance, it is now known without doubt that leprosy existed in England during the Saxon period. It has been identified at an early Saxon site at Beckford in Gloucestershire;[120] at Pockthorpe in Kent;[121] at Burwell, Cambs;[122] at St. Catherine, Thorpe in Norfolk,[123] at a seventh century site on Tean in the Isles of Scilly,[124] and tentatively at Monkwearmouth.[125]

Tuberculosis of the spine has been diagnosed at Chadlington, Oxfordshire;[126] Horndean, Hants;[125] and in two cases (one male, one female) at Worthy Park near Winchester.[127]

At North Elmham one skeleton, that of a male (inh. 176) has a right radius and ulna which are markedly stouter and longer than those on the left. Similarly at Brixworth, Northants, another male (inh.2), has a right humerus which is noticeably longer than the left.[128] In both these cases poliomyelitis has been suggested as a tentative diagnosis, though other causes such as birth injuries could have produced the same result. In this respect it is worth noting that of the half dozen descriptions of people suffering from "paralysis" or withered limbs which appear in the historical sources, four concern children or adolescents (three boys and one girl).[129] Though birth injuries could again be involved, and the evidence

---

120. C. Wells "A possible case of leprosy from a Saxon cemetery at Beckford" Med. Hist. 6 (1962) 383-85
121. A.T. Sandison "Pathological changes in the skeletons of earlier populations due to acquired disease, and difficulties in their interpretation" p. 205-43 in The skeletal biology of earlier human populations (1968) ed. D.R. Brothwell
122. V. Moller-Christensen and D.R. Hughes "Two early cases of leprosy in Great Britain" Man 62 (1962) 177-79
123. C. Wells (unpublished)
124. D. Brothwell "The palaeopathology of early British man" J.R.A.I. 91 (1961) 318-344
125. C. Wells (unpublished)

is slight, the combination of the literary and the palaeopathological evidence does lend rather more weight to the diagnosis of poliomyelitis than either would bear when considered independently. The value of combining all available sources of evidence is thus apparent.

The antiquity of Paget's disease has been confirmed by the identification of a case at Jarrow,[130] while unusual conditions such as osteogenesis imperfecta,[131] polyostotic fibrous dysplasia,[132] and Osgood-Schlatter's disease[133] have also been identified from Saxon sites.

The study of the palaeopathological evidence provides information not only about the history of various diseases, but more importantly about the background and environment that influenced them. One of the noticeable features in comparing the skeletal reports from the Saxon sites has been the considerable variation in the kind and amount of disease and injury suffered by different groups. The middle Saxon settlements at Monkwearmouth and Jarrow have proved to be consistently more healthy than the late Saxon settlements at North Elmham and Thetford. The cemeteries at Monkwearmouth and Jarrow included many of the lay population of the surrounding communities, while even the monks were not exempt from the toils of the agricultural life, as Bede's account of Abbot Eosterwine shows:

> "Oftentimes walking out to manage the affairs of the house, he would join the brethren, wherever he found them at work, and either guide the plough, beat iron with a mallet, turn the winnowing van, or assist in any other hard labour". 134

---

126. D. Brothwell, op.cit.
127. B.M.N.H. data sheets (unpublished)
128. C. Wells (unpublished)
129. V.P. 45; H.E. 1, 21; H.E. iii, 9; V.A. iv, 5
130. Calvin Wells and Nicholas Woodhouse "Paget's Disease in an Anglo-Saxon" Med. Hist 19 (1975) 396-400

The social mixture in these communities was not therefore very different from the East Anglian ones, though it is possible that the regularity of the monastic way of life contributed to their better health. Though their food was frugal it was probably not as affected by shortages as the average secular community, and it would be supplemented by tithes. The surrounding villages would presumably benefit from monastic charity in times of famine, so would also escape the worst effects. It would be encouraging to think that the medical care provided by the monasteries also helped to improve the health of its inmates, though this would be difficult to prove.

As the above paragraphs have just indicated, the interpretation of the skeletal evidence depends a great deal on a knowledge of the social background involved, and the use of literary and archaeological sources is invaluable here. The mere accumulation of individual cases of different disease, which is the way in which the palaeopathological material has often been approached in the past,[135] does not contribute much to the understanding of the illness itself. Disease does not exist in a vacuum. It has a cause, and in the case of epidemic diseases particularly, it can have devastating effects. It is these causes and effects and their influence on the communities involved that forms the main interest in the study of Anglo-Saxon medical history and it is here that palaeopathology has added much invaluable information. Previous

---

131. C. Wells "Osteogenesis imperfecta from an Anglo-Saxon burial ground at Burgh Castle, Suffolk" Med. Hist. 9 (1965) 88-89
132. C. Wells "Polyostotic fibrous dysplasia in a seventh century Anglo-Saxon" Brit. J. Radiology 36 (1963) 925-26
133. C. Wells "Osgood-Schlatter's disease in the ninth century?" B.M.J. 2 (1968) 623-24
134. H.A.B., 8

work on Anglo-Saxon medicine has not made much use of this source of information and its application here has given new insights into both the medical and the social background to Anglo-Saxon England.

---

135. D.R. Brothwell "The palaeopathology of early British man: an essay on the problems of diagnosis and analysis" J.R.A.I. 91 (1961) 318-44

APPENDIX A

List of herbs and spices used in Anglo-Saxon medicine

The appendix consists of a list of all the herbs and spices mentioned in remedies in Anglo-Saxon texts. It suggests modern botanical names for most of the plants and makes a somewhat arbitrary attempt to decide on the reliability of the identifications. The number of times a herb occurs in each of the medical texts is indicated, and such a breakdown shows clearly the division between the Herbal of ps. Apuleius and the other texts, as regards the popularity of certain herbs. The number of different ailments for which each herb is prescribed is also given, while the final column shows the total number of remedies in which the herb appears.

Name in text	Latin and/or English name	Identification					Frequency of Use						No. diff. ailments	Total No. remedies
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew		
Ac	Quercus robor L. Oak					1		12	3	3	1	1	13	20
Acanta leuce	-	1					7						7	7
Acanton		2					2						2	2
Achillea	Achillea ptarmica L. Sneezewort		1				3						3	3
Actium	Arctium lappa L. Great burdock		2				2						3	2
Aecios	-	3					3						3	3
Aeferthe		4						5	1	1	2		7	9
Aescbrote	Verbena officinalis L. Vervain			1			13	8	1	4	3		20	29
Agaofotis	-	5					3						3	3
Aizon	Sedum telephium L. Orpine		3				4						8	4
Alor	Alnus glutinosa (L.) Alder				1			3	3				5	6
Alexandria, attrum	Smyrnium olusatrum L. Alexanders				2		1	10	2	5	3	1	16	22
Alwan	Aloe vera L. Aloes				3			1	11		3	4	11	19
Ami, milium	-	6					3						5	3
Anchusa	Pentaglottis sempervirens (L.) Tausch. Alkanet		4				1						1	1
Apuldor	Cultiv. sweet apple					2		7	1	1			8	9

Name in text	Latin and/or English name	Identification					Frequency of Use						No. diff. ailments	Total No. remedies
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew		
Surapuldor	Malus sylvestris Mill. Crabapple				4				2		2		4	4
Aristolochia, smerewyrt	Aristolochia clematitis L. Birthwort				5		8	1		1			10	10
Armelu, harmala	-	7						2					1	2
Asaru	Asarum europaeum L. Asara bacca		5					1				1	2	2
Aesc	Fraxinus excelsior L. Ash					3		11		2	3		13	16
Aesp	Populus tremula L. Aspen				6			2		1			3	3
Asterion	-	8					1						1	1
Aeðelferðinc-wyrt	Stellaria holostea L. Greater stitchwort		6					3			5	1	6	9
Attorlaðe	Echinochloa crus-galli (L.) Beauv. Galium cruciata (L.) Scop.		7				1	17	5	4	4		23	31
Ayzos minor	-	9					5						6	5
Banwyrt	Various idents. viola etc.	10					5	7	1	1			13	14
Bete, personaca	Beta vulgaris L. Beet			2			6	2	5		8	1	13	22
Beowyrt, veneria	-	11					2	2	1				5	5

Name in text	Latin and/or English name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Betonica, biscopwyrt	Betonica officinalis L. Betony					4	30	47	11	14	17	9	37	128
Biscopwyrt	Mentha aquatica L. Aegopodium podagraria L.			3				33	10	13	12	3	30	71
Birice, berc	Betula pendula Roth. Silver birch					5		1	1	1			3	3
Blinde netele	Lamium album L. White dead nettle				7			1					1	1
Boden	Rosmarinus officinalis L. Rosemary					6	5	3		5	5		14	18
Bremel	Rubus fruticosus agg.					7	6	2	3	3	2		15	16
Brom	Sarothamnus scoparius L. Broom					8		3					3	3
Brunwyrt	Scrophularia aquatica L. Scrophularia nodosa L.			4			1	9	5		5	1	11	21
Bulbus	-	12					7						7	7
Bulentran	-	13						1					1	1
Bulot	-	14						1		1			2	2
Buoptalmon	-	15					2						2	2
Cammoc	Peucedanum officinale L. Hog's fennel		8				3	1	1	1	2		6	8
Capparis	Capparis spinosa L. Capers			5			1						1	1
Cassuc	Deschampsia cespitosa (L.) Beauv. Hassock grass			6				2		5	6		7	13

Name in text	Latin and/or English name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk IIq	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Cawel, caul, naep	Brassica rapa L. Brassica napus L.				8		3	4	3	4	5	5	17	24
Ceasteraesc	-	16						1		1	4		3	6
Celedenian	Chelidonium majus L. Greater celandine					9	6	16		7	7	2	17	38
Centimorbia	-	17					1						1	1
Cerlic	Sinapis arvensis L. Charlock		9					1	1				2	2
Cedelc, mercurialis	Mercurialis perennis L. Dog's Mercury				9		3						3	3
Caerse, fencaerse	Rorippa nasturtium-aquaticum (L.) Hayek.				10		7	10	2	2	4	1	18	26
Leac caerse	-	18								2			2	2
Cellendre	Coriandrum sativum L. Coriander				11		3	6	3	5		1	12	18
Cerville	Anthriscus cerefolium (L.) Hoffm.				12		1	5	3		6	3	16	18
Wudu cerville	Chaerophyllum temulentum L. Anthriscus sylvestris (L.) Hoffm.			7			4	2	1	2	4		11	13
Chamepithys	Ajuga chamepithys (L.) Schreb. Groundpine		10				3						3	3
Chemedris	-	19					4						4	4
Clate, philanthropos	Arctium lappa L. Great burdock				13		2	10	2	4	8	1	24	27

Name in text	Latin and/or English name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Smale clate, hegerife	Galium aparine L. Goosegrass, cleavers				14			10		3	8		14	21
Claefre	Trifolium pratense L. Trifolium repens L.				15		1	2	2	2	1		8	8
Clofdung	Ranunculus sceleratus L. Crowfoot				16		3	4			2		7	9
Clufwyrt	Ranunculus acris L. Meadow buttercup				17		2			1			3	3
Cneoholen	Ruscus aculeatus L. Butchers broom					10	2	7	1		2		9	12
Codonia	Cydonia 6blonga Mill. Quince			8			1						1	1
Columbina	Aquilegia vulgaris L. Columbine		11				2					1	3	3
Conize	Pulicaria dysenterica (L.) Bernh. Fleabane		12				8						6	8
Cost	Tanacetum balsamita L. Costmary				18			7	7	1	4	1	13	20
Croh	Crocus sativus L. Saffron			9			1		1			1	3	3
Cropleac	-	20						11	1	7	4		10	23
Cucurbita	Cucumis colocynthis L. Colocynth		13				1		1				2	2
Cuslyp	Primula veris L. Cowslip					11				2	2		2	4
Cunille		21						2		1			3	3

Name in text	Latin and/or English Name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Cwicbeam	Sorbus aucuparia L. Rowan, poss. aspen			10				5		2	1		5	8
Cwice, gramen	Agropyron repens (L.) Beauv. Couch grass					12	1		1		3		4	5
Cymen	Cuminum cyminum L. Cumin				19		6	8	10	2	4	5	27	35
Cynos batus	-	22					2						2	2
Delphinum	Delphinum ambiguum L. Larkspur		14				1						1	1
Dile, anetum	Peucedanum graveolens Benth. Dill					13	3	3	22	5	5	5	23	43
Dictamnum	-	23					5						4	5
Docce, ompre	Rumex obtusifolius L. Rumex crispus L.				20		1	12	2	1	4		16	20
Docce þaere þe swimman	Nuphar lutea (L.) Sm. Yellow waterlily			11				4	3	2	2		9	11
Dolhrune	Parietaria diffusa Mert. + Koch. Pellitory					14	1	5	2	2	3	1	13	14
Dracontion	-	24					3			1		1	5	5
Ealiver	-	25						1	1				2	2
Earban	Vicia hirsuta (L.) S.F. Gray Tare		15					1					1	1
Eofordrote	Carlina vulgaris L. Carline thistle		16					12	1	7	5		22	25
Eordgealle, curmelle	Blackstonia perfoliata (L.) Huds. Yellowwort				21		3	10	9	8	10	1	25	41

Name in text	English and/or Latin name	Identification					Frequency of use						No. diff. ailments	Total No. remedies
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew		
Eordnafole	Umbilicus rupestris (Salisb.) Dandy Lady's Navel				22		3				3		5	6
Eordrima	-	26								1			1	1
Ellen	Sambucus nigra L. Elder				23		4	8	9	5	1	1	14	28
Ellenwyrt, waelwyrt	Sambucus ebulus L. Dwarf elder					15	3	10	2		2	1	11	17
Elehtre	Lupinus nootkatensis Donn ex Sims Lupin					16	3	20	5	14	9		24	51
Elene, helenium, sperewyrt	Inula helenium L. Elecampane			12			3	26	11	13	17	6	27	76
Aelfdone	-	27						1	1	6			4	8
Elm	Ulmus procera Salisb. English Elm					17		6		3			7	9
Eordifig, hofe	Glechoma hederacea L. Ground ivy					18	7	16	7	3	3	3	23	39
Equisetum	-	28					2						2	2
Eringius	Eringium maritinum L. Sea holly			13			6						9	6
Eoforfearn	Polypodium vulgare L. Polypody fern				24		1	8	3	1	4		12	17
Efelaste	-	29						5	2		1		6	8
Eagwyrt	Euphrasia officinalis agg. Eyebright			14						1	1		1	2
Eow	Taxus baccata L. Yew					19				1			1	1

Name in text	English and/or Latin name	Identification					Frequency of Use						No. diff. ailments	Total No. remedies
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew		
Fane	-	30						1		1	3		5	5
Feldmore, Englisc moru	Pastinaca sativa L. Wild Parsnip				25		2	4	1	5	2		13	14
Feltwyrt	Verbascum thapsus L. Mullcin			15			2						2	2
Fifleaf	Potentilla reptans L. Cinquefoil					20	9	6	2	1	5	3	21	26
Finol	Foeniculum vulgare Mill. Fennel					21	3	19	14	12	15	3	33	66
Fenogrecum	Trigonella foenum-graecum L. Fenugreek					22			4				3	4
Ferdwyrt	-	31						1					1	1
Felix	Dryopteris felix-mas (L.) Schott.			16			2	2					4	4
Feferfuge, curmelle	Centaurium erythraea Rafn. Common centaury					23	8	7	1	3	11	1	16	31
Feldwyrt	Gentianella amarella (L.) Felwort			17			1						1	1
Fleotwyrt	-	32							1				1	1
Fornetes folm	-	33						2					2	2
Foxesfot	-	34					4						4	4
Gagol	Myrica gale L. Bog myrtle				26			1	2	1	3		4	7
Galluc, confirma	Symphytum officinale L. Comfrey				27		3	5		2	2		12	12

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Garclife, agrimonia	Agrimonia eupatoria L. Agrimony					24	8	8	5	7	8	1	21	37
Garleac	Alliumoleraceum L. Field Garlic			18				10	2	3	5	5	17	25
Gatetreow	-	35						1					1	1
Gearces sur	Oxalis acetosella L. Wood sorrel				28			4		1	1		6	6
Gelodwyrt	Potentilla anserina L. Silverweed		17					6			1		3	7
Gescadwyrt	-	36							1				1	1
Giðcorn	Daphne laureola L. Spurge laurel		18				1	1	2	2			4	6
Giðrife	Agrostemma githago L. Corn cockle					25		24	3	7	6	1	21	41
Gearwe	Achillea mi llefolium L. Yarrow					26	15	19	3	8	7	2	31	54
Glaedene	Scilla autumnalis L. Squill		19				4						4	4
Glaedene (ii)	Iris foetidissima L. Stinking Iris			19			3	1	3	2	2	2	8	13
Glofwyrt	-	37					1	1					2	2
Glycyrida	-	38					5						5	5
Gorgonion	-	39					1						1	1
Gotwoðe	Aegopodium podagraria L. Goutweed				29			7	2				7	9
Greatewyrt, hierobulbus	-	40					2	1					3	3

Name in text	Latin and/or English name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Grundeswylige, Senecio	Senecio vulgaris L. Groundsel					27	4	13	1	1	9		16	28
Haewen hydele Reade Netele	Lamium purpureum L. Purple dead nettle				30		5	14	6	1	4	1	23	31
Hafocwyrt	-	41						1					1	1
Halswyrt	-	42					1				2		3	3
Hamorwyrt	-	43						2			3	2	7	7
Haranhyge	-	44					1						1	1
Haran sprecel	Echium vulgare L. Vipers bugloss			20				6	1	2	2		10	11
Haranwyrt	-	45						2	1	1			4	4
Hafocwyrt	-	46						1					1	1
Hagaþorn	Crataegus monogyna Jacq. Hawthorn					28	1	3					3	4
Haesel, hnut beam	Corylus avellana L. Hazel					29		5	1	1	3		10	10
Harehune	Marrubium vulgare L. Horehound					30	9	21	9	10	11	9	34	69
Healfwudu	-	47						1					1	1
Haeþbergean	Vaccinium myrtillus L. Bilberry			21						1			1	1
Hedera, yfig	Hedera helix L. Ivy					31	1	4	4	4	3		14	16
Helde	Chrysanthemum vulgare (L.) Bernh. Tansy					32		2			2	1	5	5

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Heleleaf	-	48									1		1	1
Henep	Cannabis sativa L. Cannabis			22			2						2	2
Hennebelle, belene	Hyoscyamus niger L. Henbane					33	7	8		5	4	1	19	25
Heraclea	-	49					1						1	1
Hillwyrt	-	50									2		2	2
Hindberig	Rubus idaeus L. Raspberry			23					2		1		2	3
Hymlic	Conium maculatum L. Hemlock					34		5		1	2		7	8
Hindheal	-	51					1	9	4	7	5	1	19	27
Hlaedderwyrt	-	52									1		1	1
Hleomoc	Veronica beccabunga L. Brooklime					35		3		6	2		8	11
Hocleaf, mealwe, geormenleaf	Malva sylvestris L. Common mallow			31			4	9	3	5	2	3	23	26
Holancerse	-	53						3					3	3
Holen	Ilex aquifolium L. Holly			32				5	1	2	1		7	9
Hraefnesfot	-	54					2	2	-	2	3	2	7	9
Hraefnesleac	-	55					2						2	2
Hram gealla	-	56						1	1				2	2
Hundes heafod	-	57					1						1	1

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Hundes tunge	Cynoglossum officinale L. Hounds tongue				33		3	6		1	1		9	11
Hwerhwet	Cucumber Not English species			24			2	1	3	3	2		8	11
Hwit popig	Papaver somniferum L. Opium poppy			25			4	1	1				5	6
Hymele	Humulus lupulus L. Hop			26			3			1	2		6	6
Hypericon	-	58					3						3	3
Iris illyrica	-	59					7						7	7
Isenheard	-	60									2		2	2
Kincean	-	61						1					1	1
Lacterida	Euphorbia Lathyrus L. Caper spurge		20				3						3	3
Lactuca	Sonchus oleraceus L. Sow thistle			27			1		1			1	3	3
Laecewyrt	-	62					1	3					3	4
Leabowyrt	Saponaria officinalis L. Soapwort			28				1					1	1
Laur, lawerbeam	Laurus nobilis L. Bay laurel				34			4	9		3	3	10	19
Laber	Iris pseudacorus L. Yellow Flag		21				2						2	2
Leac	Allium porrum L. Leek		22					3	5		4	3	14	15
Lilia	-	63					2	2	1	3	4	1	9	13
Leonfot	-	64					1						1	1

		Identification					Frequency of Use							
Name in text	English and/or Latin name	Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Linwyrt	Linum usitatissimum L. Flax			29				2		1			3	3
Liðwyrt	-	65					2	2	1		1		4	6
Litospermon	-	66					1						1	1
Lufestice, lubestica	Ligusticum scoticum L. Lovage				35		1	4		3	4	3	16	15
Lungenwyrt	Pulmonaria officinalis L.			30				1					1	1
Lustmoce	Cardamine pratensis L. Ladys smock			31				6					4	6
Maedere	Rubia peregrina L. Wild madder				36		2		1				3	3
Male granatum	Punica granatum L. Pomegranate		23				1						1	1
Mandragora	Atropa mandragora Mandrake					36	6						6	6
Mapuldor	Acer campestre L. Maple					37		1					1	1
Merce, apium	Apium graveolens L. Wild celery			32			3	13	19	5	9	1	29	50
Mare twynihte	-	67						1					1	1
Mersc hofe	-	68						1					1	1
Mersc mealwe	Altheaea officinalis L. Marsh mallow					38	2		1	2			5	5
Mersc meargealle	Caltha palustris L. Marsh marigold				37			2			1		2	3

Name in text	English and/or Latin name	Identification					Frequency of Use						No. diff. ailments	Total No. remedies
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew		
Maegde	Chamaemelum nobile (L.) All. Anthemis cotula				38		1	11	1	3	2		11	18
Medowyrt	Filipendula ulmaria (L.) Maxim Meadowsweet				39			8	1		4		8	13
Melde	-	69									2		2	2
Minte, mentastrum, tunminte	Mentha longifolia (L.) Huds. Mentha viridis L.				40		2	7	9		4	3	19	25
Brocminte, fenminte	Mentha aquatica L. Water mint				41		1	3		1	2		7	7
Milotis	-	70					2						2	2
Mistel, ocimum	Clinopodium vulgare L. Cushion calamine		24				3	1					4	4
Morwyrte	-	71						1					1	1
Moru, wealmore	Daucus carota L. Carrot			33				2	1	1		1	5	5
Mucgwyrt, artemisia	Artemisia vulgaris L. Mugwort				39		13	8	2	3	4	3	21	33
Murra	Myrrhis odorata (L.) Scop. Sweet cicely		25					1			1	2	4	4
Naedrewyrt	-	72					1						1	1
Naedrewyrt (ii)	Polygonum bistorta Bistort			34			1	2			1		3	4
Nepte	Nepeta cataria L. Catmint				40		1	4	2	4	1		11	12
Netele	Urtica dioica L. Stinging nettle				41		8	8	2	2	2		16	22

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Nymphaia	-	73					3						2	3
Oenanthe	-	74					2						2	2
Oleaster, elebeam	Olea europaea Olive		26					2					2	2
Omnimorbia	-	75					4						4	4
Onred	-	76						1	1				2	2
Ontre	-	77						10	7	4	2		14	23
Organe, serpillum	Origanum vulgare L. Wild Marjoram				42		5				2	2	8	9
Oxlyp	Primula elatior (L.) Hill Oxlip				43			1			1		2	2
Oxnalyb	Helleborus viridis L. Green hellebore		27					2					2	2
Paeonia	Paeonia mascula (L.) Mill Paeony					42	2						2	2
Pulegium, dweorge dwostle	Mentha pulegium L. Pennyroyal					43	16	7	10	9	12	5	39	59
Petersilie	Petroselinum crispum (Mill) Nyman Parsley			35			2		4	2	2		9	10
Pintrywene	Pinus sylvestris L. Scots Pine					44	1		2			1	4	4
Plumtreow	Prunus domestica L. Plum					45				1			1	1
Polion	-	78					1						1	1
Polloten	-	79					2						2	2

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Priapiscus, vinca pervinca	Vinca minor L. Periwinkle			36			1			1	1		5	3
Psillios	-	80					2						2	2
Porcilaca	-	81					1						1	1
Raedic	Raphanus sativus L. Radish			37				13	7	6	18	2	27	46
Reade niolin	-	82								1			1	1
Reade rydene	-	83								1			1	1
Ribbe	Plantago lanceolata L. Ribwort				46		3	11		2	3	2	17	21
Ricinus, lybcorn	Ricinus communis L. Castor oil plant					44	1	2	6	4	4		4	17
Rosa, rose	Rosaceae Numerous species					45	9	6	7		3		16	25
Rude	Ruta graveolens L. Rue					46	14	20	23	14	16	9	35	96
Rusc, risc	Juncus conglomeratus Common rush					47			2				2	2
Salvia	Salvia officinalis L. Sage					48	2	5	2	3	9	3	17	24
Sabine	Sabina cacumina L. Savine			38			4	2	2	1	8	2	15	19
Satureia	Satureia montana L. Savory			39						1	2	1	4	4
Scamonia	Convolvulus Scamonia L. Scammony	28							3				1	3

Name in text	English and/or Latin name	Identification					Frequency of Use						No. diff. ailments	Total No. remedies
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew		
Scolimbos	-	84					2						2	2
Scordion	-	85					3						3	3
Scordios	-	86					7						7	7
Secg	Carex L. sedges			40				7		1	1		8	9
Secgleac	Allium schenoprasum L. Chives		29					1			1		2	2
Septifolium	Potentilla erecta (L.) Rausch. Common tormentil			41			1						1	1
Sigsonte	-	87						2					2	2
Sinfulle	Sempervivum tectorum L. Houseleek					47	1	3	3	1		1	9	9
Singrene, hamwyrt	Sempervivum tectorum L.				49		1	13	3	2	2		14	21
Slahdorn	Prunus spinosa L. Blackthorn					48		7	1	2	1		11	11
Slarian	Salvia horminoides Pourr. Wild clary			42				1			2		3	3
Solago major Solago minor	-	88					2						2	2
Solatrum	-	89					4						4	4
Solhwerf, sigelhwearfa	Chrysanthemum segetum L. Corn marigold		30				5	2		3	2		10	12
Spracen	Frangula alnus Mill. Black alder			43				3					3	3
Slite, orbicularis	-	90					5						4	5

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Suðernwudu, abrotanon	Artemisia abrotanum L. Southernwood			44			7	5	3		5	2	14	22
Spreritis	-	91					3						3	3
Springwyrt	Euphorbia lathyrus L. Caper spurge		31					15	2	1	2	1	14	21
Staeðwyrt	-	92						1					1	1
Stavis agria	-	93					3						3	3
Stecas	-	94					2						2	2
Stancrop	Sedum acre L. Wallpepper			45									3	3
Straelwyrt	-	95						2					2	2
Streowberian, fraga	Fragaria vesca L. strawberry					49	2	3		2	4		8	11
Strutium	-	96					5						5	5
Sundcorn, saxifragia	Saxifraga granulata L. Meadow saxifrage				50		1			2	2		4	5
Swaeles aeppel	-	97						4	1	3		1	6	9
Swanwyrt	-	98						1					1	1
Symphytum album	Symphytum officinale L. Comfrey		32				1						1	1
Ðeorwyrt	-	99						1		1	1		2	3
Ðefeðorn	Rhamnus catharticus L. Buckthorn		33							3	1		4	4
Ðunge	-	100						5		2			6	7
Ðyaspis	-	101					2						2	2

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Tribulus, gorst	Ulex europaeus L. Gorse			46			6	1				1	8	8
Trycnos manicos	-	102					4						4	4
Tunsingwyrt, wedeberge	Veratrum album L.		34				4	3				1	7	8
Terebinta	-	103							1				1	1
Unfortraedde	Polygonum aviculare, agg. Knotgrass			47			7						7	7
Viola purpurea	Viola odorata L.			48			2						2	2
Waeterwyrt	-	104					2						2	2
Wegbraed	Plantago major L. Plantain					50	24	28	8	7	6	3	40	76
Wenwyrt	-	105						8	5	7	3		11	23
Wiðig, wylig, sealh	Salicaceae L. Willows etc.					51		6		1	2		7	9
Windelstreaw	-	106						1					1	1
Wir, wirtreow	Myrtle, poss. also gale Myrica gale L.		35				2	3		1	1	2	7	9
Wiðigwynd	Convolvulus arvensis L. Bindweed				51			3		1			4	4
Wad, aluta	Isatis tinctoria L. Woad					52	1	4	2	1			8	8
Wraette	Galium cruciata (L.) Scop. Crosswort			49						3	2		4	5
Wulfes camb	Dipsacus fullonum L. Teasel			50			7		1	3	2		8	13

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Wudu docce, sur docce	Rumex acetosa L. Common sorrel				52		1	4	1				6	6
Wudu leahtric	Lactuca virosa L. Wild lettuce		36				2				1		1	3
Wudu merce	Sanicula europaea L. Sanicle				53			5	1	4	2	1	10	13
Wudu roffe	Galium odoratum (L.) Scop. Woodruft			51			4	5		4	5		14	18
Wuduðistel	Circium vulgare (savi) Ten. Spear thistle		37				2			2	1		4	5
Wuduwax	Genista tinctoria L. Dyers Greenweed				54			2		2	4	1	3	9
Wermod, artemisia	Artemisia absinthium L. wormwood					53	5	21	26	14	14	7	37	87
Wormwyrt	-	107						3		1			4	4
Wowelle, welde	Reseda luteola L. weld		38						1				1	1
Wudubende	Lonicera periclymenum L. Honeysuckle			52			1	2		3	3		6	9
Wice	Ulmus glabra Huds. Wych elm			53				1					1	1
Ysopa	Hyssopus officinalis L. Hyssop				55		1	1	1		2	3	7	8
Zamalentition	-	108					2						2	2

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Addenda: Names omitted in their correct place:														
Ananbeam	Euonymus europaeus L. Spindle tree			54				1					1	1
Baldsamum, balsame	Commiphora opobalsalmum Balsam					54		2	1			3	6	6
Benedicte	-	109									1		1	1
Brysewyrt	-	110										1	1	1
Cicena mete	Stellaria media (L.) Vill. Chickweed				56					1	2	1	5	4
Ciepe, cipa	Allium cepa L. Onion				57			4					4	4
Ferwyrt	-	111										1	1	1
Gingifer	Zingiber officinale Rosc. Ginger					55		11	2	8	7		25	28
Hwaetan moru	Echallium elaterium L.		39									1	1	1
Hwitcudu	Pistachia Lentiscus L. Mastic					56		6	6	2	1	3	15	18
Morbeam	Morus nigra L. Mulberry				58						1	3	2	4
Murre	Commiphora myrrha Holmes Myrrh					57			4				4	4
Pipor	Piper nigrum L. Black pepper					58	4	32	27	4	14	11	76	92
Recels	Boswellia Thurifera Frankincense					59		2	4	3	4		13	13

Name in text	English and/or Latin name	Identification					Frequency of Use							
		Unid	Dub	Poss	Prob	Posit	PsA	Lbk I	Lbk II	Lbk III	Lacn	Elsew	No. diff. ailments	Total No. remedies
Selfaete	Avena ludovicina Durieu Wild Oat		40							1			1	1
Senep	Sinapis alba L. Mustard					60		5	3	1		2	10	11
Sideware	Curcuma zedoaria Roscoe. Zedoary					61					3		3	3
Sudernrinde, ofersaewisc rind	Cinnamomum zeylanicum Nees. Cinnamon				59		1	1			1	2	5	5
Swefl	Sulphur					62		10	3	1	3		12	17
Wilone naep	-				112					1	1		1	1

N.B. Botanical names follow the usage of A.R. Clapham, T.G. Tutin and E.F. Warburg, Flora of the British Isles (2nd ed. 1962), except for non-British species, which follow M. Grieve, A Modern Herbal (1931)

APPENDIX B

The original Latin or Old English of sources quoted in English in the main text

A number of passages from the documentary sources have been quoted at length in the main body of the thesis, and for the convenience of the reader these quotations have been in English. The originals are included for reference in this appendix, rather than in footnotes, in order not to overload the text.

In one or two places quotations have been taken from translations of texts for which there is no printed source, and it has thus not been possible to quote the original. The references to texts on ethics and etiquette quoted in chapter 5 are a case in point, and are quoted in MacKinney's translation only.

The passages appear in the order in which they first occur in the thesis.

1. Vita Cuthberti prosaica auctore Beda, ch. 33 in B. Colgrave Two Lives of Saint Cuthbert (1940)

Eodem tempore pestilentia subito exorta illis in partibus gravissima nece incubuit, ita ut in magnis quondam refertisque habitatoribus villis ac possessionibus vix parvae raraeque reliquiae et interdum nullae residerent. Unde sanctissimus pater Cuthbertus diligentissime suam lustrans parrochiam, eisdem parvissimis quae superfuere reliquiis ministerium verbi et necessariae consolationis opem ferre non desiit. Adveniens autem in viculum quendam, ibidemque omnibus quos invenerat auxilio exhortationis adhibito, dixit ad presbiterum suum, Putasne superest quispiam his in locis cui nostra visitatione et allocutioneopus sit. An cunctis qui male habebant visis iam ad alios transire licet? Qui circumspiciens omnia, vidit mulierum eminus stantem, quae extincto paulo ante filio fratrem eius iam morti proximum tenebat in manibus, lacrimisque faciem rigantibus praeteritam pariter et praesentem testabatur erumnam. Quam cum viro Dei ostenderet, nil moratus accessit ad eam et benedicens dedit osculum puero, dixitque ad matrem, Ne timeas nec mesta sis, salvabitur enim et vivet infans, neque ullus ultra de domu tua hac mortalitatis peste deficiet. Cuius prophetiae veritati ipsa cum filio mater multo exinde tempore vivens testimonium dabat.

2. "Passion of St. Bartholomew the Apostle" in Aelfric, Homilies ed. B. Thorpe (1843-6) Vol. 1 p. 470-73

For mislicum intingum beoð cristene men geuntrumode hwilon for heora synnum, hwilon for fandunge, hwilon for Godes wundrum, hwilon for gehealdsumnysse godra drohtnungra, þaet hi þy eadmodram beon; ac on eallum ðisum þingum is geðyld nydbehefe ... Gif se synfulla bið gebrocod for his unrihtwisnysse, þonne gif he mid gyðylde his Drihten herað, and his miltsunge bitt, he bið ðonne adwogen fram his synnum ðurh ða untrumnysse, swa swa horig hraegl þurh sapan. Gif he rihtwis bið, he haefð þonne maran geðincðe þurh is brocunge, gif he geðyldig bið. Se ðe bið ungeþyldig, and mid gealgum mode ceorað ongean God on his untrumnysse, he haefð twyfealde geniðerunge, forðan ðe he geycð his synna mid þaere ceorunge, and þrowað naðelaes.

3. "The passion of St. Bartholomew the Apostle", Ibid., p. 472-3

God is se soða laece, þe ðurh mislice swingla his folces synna gehaeld. Nis se woruld-laece waelhreow, ðeah ðe he bone gewundodan mid baernette, oððe mid ceorfseaxe gelacnige. Se laece cyrfð oððe baernð, and se untruma hrymð, þeah hwaeðere ne miltsað he þaes oðres wanunge, forðan gif se laece geswicð his craeftes, þonne losað se forwundoda. Swa eac God gelacnað his gecorenra gyltas mid mislicum brocum; and þeah ðe hit hefigtyme sy ðam ðrowigendum, þeah hwaeðere wyle se goda Laece to ecere haelðe hine gelacnigan.

4. Bede, De Tempore Ratione ch. xxxv, in C.W. Jones Bedae De Opera Temporibus (1943)

Sed et homo ipse, qui a sapientibus microcosmos, id est minor mundus appellatur, hisdem per omnia qualitatibus habet temperatum corpus, imitantibus nimirum singulis eius quibus constat humoribus, modum temporum quibus maxime pollet. Sanguis siquidem, qui vere crescit, humidus et calidus; cholera rubea, quae aestate, calida et sicca; cholera niger, quae autumno, sicca et frigida; phlegmata, quae hieme, frigida sunt et humida. Et quidem sanguis in infantibus maxime viget, in adolescentibus cholera rubea, melancholia in transgressoribus, id est fel cum faece nigri sanguinis admixtum, phlegmata dominantur in senibus.

5. St. John's College MS 17, f.1^{v}, printed in Charles Singer, "A review of the medical literature of the Dark Ages", Proc. Roy. Soc. Med. 10 (1917) 128-9

Hi quattuor humores dominantur in suis locis. Sanguis dominatur in dextro latere; in epate quod iecur vocamus. Aliter in corde. Colera rubea in eodem latere ubi vesica plena est felle hoc est in dextro; /C̄olera/ nigra in sinistro quo sunt /s̄/plene. Fleuma autem in capite scilicet una pars, altera in vesica ...

Hi vero humores habent respirationes per singulas partes corporis. Sanguis per nares. Colera rubea per aures. Colera nigra; per oculos. Fleuma; per os.

Quattuor hi humores. mores tales faciunt. Sanguis facit hominem bonae voluntatis, simplicem, moderatum, somno plenum et crassum. Colera rubea /f̄acit hominem imperterritum. an iustum. macilentum. benemanducantem et cito digerentem. Colera nigra/ facit iracundum. auarum. tumidum /? for cupidum/. tristem. inuidiosum. sepe habentem in pedibus cicatricem. Fleuma facit compositum corpore, vigilantem. in se infra cogitantem. canes /p̄robably for canities/ cito producentem.

Corpus iiii habet in se qualitates et iiii rebus consistit ossibus, neruis, venis, carne. Continet in se frigidum, calidum, humidum et siccum. Et enim iiii habent diuersitates. Esurit. sitit. concupiscit. soporatur, et iiii sunt usus naturae manducare, bibere, generare, dormire.

6. St. John's College MS 17, f. 175^{v}, Ibid., p. 138-141

Corpus hominis dividitur in iiii partes, caput, pectus, ventrem, atque vesicam; quia ver capiti nocet. aestas toraci. autumnus ventri. hiems vesicae. Natura precipue hominum, pecudum. alitumque; calido. frigido. sicco et humido continetur. Frigus enim continet viscera unde suspiramus. calor continet animam de qua vivimus. id est. de qua vitam sentimus. sicca sunt ossa quae vires faciunt ad sustentandum vitae nostrae laborem. per viscera venae currunt /cum humido eorum/ quae sanguine reguntur. Sanguis anime vitam sustinet. spiritus autem aer est vitae. Ossa neruis munita. virtutem corporis parant.

Sanguis cum habundat valitudinem infert et ex ea nascitur sanies quam in vulneribus sectis videmus. Nascitur etiam bilis acida vel amara, quae materia dicitur morborum. Bilis enim cum fuerit, concitat calorem. Pituita. per frictionem quae facit dolorem intestino. Oritur enim inflatio, quae corpus extendit ut rumpi videatur. Sanguis autem a nimio cibo, nimiaque potatione incipit habundare et a cruditate corrumpitur. Qui cum evagatur extra cursum naturalem. infert aliqua corporis vitia. Et enim in quacunque parte corporis incubuerit. corruptus fatigat. et ledit corpus.

Corruptus sanguis animum viciat. et inde os hominis incendit. incipitque fetere. Nam cum est integer sanguis continet animam sine labore et corpus confirmat ut possit frigus. caloremque fortius sustinere. Nam cum habundat. et calor animum. sanguinemque concitat. et sit sanies quam bilem dicimus, quae concitat calorem ut frigus. quae facit corporis languorem animaeque malum generat odorem ...

Quattuor enim partes corporis originem ostendunt. a capite et torace; ventre et vesica ...

Cum enim a capite morbus oritur. solet capitis dolorem penetrare. Tunc et supercilia grauantur tempora saliunt, aures sonant, oculi lacrimant, nares repletae odorem insentiunt. Cum ex his aliquid accidit caput purgari oportet hac ratione; Ysopi aut conule. bubulae. fasciculum feruere facias ad tercias. Sed exinde aquam ore continebis et caput calide tractabis ut fluat pituita. Quod si quis negligit caveat epiforas oculorum aut dentium dolorem. Interdum etiam strumae paratides nascuntur et alia vicia quae circa fauces cervicesque oriri solent ...

Cum autem a torace morbus nascitur incipit caput sudare linguaque sit grossior aut os amarum, aut tunsiles dolent. oscitatio sequitur frequens sine somno et quiete. torpor membrorum animique dolor. prurigo corporis. brachia manusque assidue tremescunt, subitoque tussis arida et inquieta nascitur. Ex his ergo cum aliquid acciderit. in talibus vicium grave. si vomueris sive ieiunus seu pro caenam vel in balneo. Plus autem prodest si ieiunus bilem eieceris. eam dicimus matrem morborum ...

Quod si a ventre morbus oritur. haec erunt signa. Ventus vertitur atque turbatur et sentiet crebros dolores. cibus et potus amari videbuntur. succidunt genua. lumbi gravantur. interscapilium contrahitur. totumque corpus particulatim gravabitur. tardantur pedes. pigra fiunt crura. renes indolescunt et pro haec febriculae incurrunt ...

A vesica cum nascuntur morbi haec dabunt signa. Pleni videbuntur et cito saturari. sequitur inflatio ventris, strepitus creber videtur oscitare nec oscitant, sed tantum os deinducunt sequitur totius corporis stupor, sonusque gravis sit urina livida et vix erumpens tumescere etiam verenda et inde calculosi fiunt.

7. St. John's College MS 17, f. 1^{v}-2^{r}, Ibid., p. 131

Sanitatem continet in se sincerat mitem, providet memoriam, purgat vesicam, cerebrum exuocat, califacit medullam, abditum aperit, lacrimas stringit, fastidium tollit, stomachum propic/ciat. dignitatem invitat levem. vocem producit. sensum construit. venerem cohercet. somnum fugat. anxietatem decrescit. primum sanguinem nutrit. extraneum abicit. longiorem vitam administrat. bonam perseverantiam facit. omnes incautissimas collectiones remediat. acutas febres. ac reumaticas passiones. pestiferasque valitudines pellit.

8. Bede, De minutione sanguinis sive de phlebotomia in J.A. Giles, Patres Ecclesia Anglicanae, Vol. vi (1843)

Plures sunt dies Aegyptiaci, in quibus nullo modo nec per ullam necessitatem licet homini vel pecori sanguinem minuere, nec potionem impendere, sed ex his tribus maxime observandi, octavo Idus April. illo die lunis, intrante Augusto: illo die lunis, exeunte Decembri: illo die lunis cum multa diligentia observandum est, quia omnes venae tunc plenae sunt.

Qui in istis diebus hominem aut pecus inciderit, aut statim aut in ipso die vel in tertio morietur aut ad septimum diem non perveniet; et si potionem quis acceperit, quindecimo die morietur: et si masculus sive mulier in his diebus nati fuerint, mala morte morientur; et si quis de auca in ipsis diebus manducaverit quindecimo die morietur.

9. Poenitentiale Theodori in A.W. Haddan + W. Stubbs, Councils and Ecclesiastical Documents Vol. III (1869)

xv. De cultura Idolorum

... 2. Mulier si qua ponit filiam suam supra tectum vel in fornacem pro sanitate febris vii annos peniteat.

3. Qui ardere facit grana, ubi mortuus est homo, pro sanitate viventium et domus, v annos peniteat.

4. Si mulier incantationes vel divinationes diabolicas fecerit l annum vel iii xlmas, vel xl, iuxta qualitatem culpae peniteat. De hoc in canone dicitur; qui auguria, auspicia sivi somnia vel divinationes quaslibet secundum mores gentilium observant, aut in domus sua huiusmodi homines introducunt, in exquirendis aliquam artem maleficiorum, penitentes isti, si de clero sunt, abiciantur; si vero seculares, quinquennio peniteant.

10. Aelfric, Lives of the Saints Vol. I p. 368-79 ed. W.W. Skeat E.E.T.S. (1881-1900)

Nu alyse ic me sylfne wiþ god and mid lufe eow forbeode þaet eower nan ne axie þurh aenigre untrumnysse ne galdras ne sece to gremigenne his scyppend ...

Ne sceal se cristena befrinan þa fulan wiccan be his gesundfulnysse þeahþe heo secgan cunne sum þincg þurh deofol forþan þe hit biþ derigendlic and eall hit biþ aettrig þaet him of cymþ and eall his folgeras forfaraþ on ende.

Sume men synd swa ablende þaet hi bringaþ heora lac to eorþfaestum stane and eac to treowum and wylspringum swa swa wiccan taecaþ and nellaþ understandan hu stuntlice he doþ oþþe hu se deade stan oþþe þaet dumbe treow him maege gehelpan oþþe haele forgifan þone hi sylfe ne astyriaþ of þaere stowe naefre ...

11. Vita Cuthberti prosaica auctore Beda, ch. 45 in Colgrave, op.cit.

Erat in monasterio quodam non procul inde posito adolescens, ea quam Greci paralisin vocant infirmitate, omni membrorum officio destitutus. Unde abbas ipsius sciens in monasterio Lindisfarnensi medicos esse peritissimos, misit eum illo, rogans infirmanti si quid possent curationis conferrent. Qui cum suo quoque abbate et episcopo iubentibus diligenter illi assisterent, et quicquid nossent erga eum industriae medicinalis impenderent, nichil omnino proficere valebant, quin potius crescebat cotidie morbus et paulatim in deteriora vergebat, adeo ut excepto ore nullum pene membrum posset loco movere. Cunque a carnalibus medicis diu frustra laborantibus desperatus ac desertus iaceret, confugit ad divinum medici coelestis auxilium ...

12. Vita Cuthberti prosaica auctore Beda, ch. 32 in Colgrave, op.cit.

Ecce subito apparuerunt mulieres ferentes in grabato iuvenem longae egritudinis acerbitate tabefactum. Ponentesque in exitu silvae, miserunt ad episcopum rogantes ut accipiendam benedictionem ad se hunc afferri permitteret. Quem cum ad se perductum accerrime vexatum conspiceret, iussit omnes secedere longius. Et ad solita orationis arma confugiens, data benedictione pepulit pestem, quam sollicita medicorum manus pigmentorum compositione nequiverat.

13. William of Malmesbury Vita Wulfstani II, 13 ed. R.R. Darlington (Royal Historical Society 1928)

Huius erat mulier indigena, cuius natales ita natura formaverat; ut nec multum dives altum tumeret, nec multum humilis humi reperet. Eiusdemque mediocritatis sortitia maritum; pro fortuna mediocriter victitabat. Set enim nulla unquam inconcussa felicitas; nulla unquam sine turbine leticia egris arridet mortalibus. Huius quoque domesticos successus interpolavit repentinus morbus. Morbus qui non solum unum membrum, sed etiam omnes artus premeret; qui omnes articulos nodositate quadam constringeret. Accrevit indies auctior labes; et mulierem grabato invexit. Ipsa interim, nec minus maritus medicorum opem in modicis sumptibus sollicitabant. Illi sedulo instare, arti sue non de esse; quod minus possent facto, promissis supplere; commeatum deliberandi sepius frustrati. Evacuabat enim omnem industriam, attenuabat omnem efficatiam fortuna; vel quod magis crediderim celestis providentia; huiusmodi opus antistitis sui fore speculata. Iamque multo tempore in penum congesta defecerant; cum illa humana ope desperata ad Christi fugit suffragia. Consulte et provide.

14. Eddius Stephanus, Life of Bishop Wilfrid ch. 37, ed. B. Colgrave (1927)

Mulier ... totis membris dissolutis rigida, frigido corpore, clausis oculis spumantique ore ultima spiramina vitae de pectore insensata trahebat ... Sanctus autem pontifex ... aqua benedicta faciem aspergens, et oratione facta, Dei auxilium deplorans, os eius guttatim aqua benedicta madefactum irrigavit; deinde autem oscitante et longa spiramina trahente, apertis oculis sensum vitae et intelligentiae recepit, et post paululum calefactis membris, capite elevato, lingua movente, loquebatur, gratias agens Deo.

15. Vita sancti Cuthberti auctore anonymo II, 8 in B. Colgrave, op.cit.

Fuit quidam vir religiosus specialiter carus homini Dei nomine Hildmaer, cuius uxor a demonio vexabatur nimis. Illa namque multum vastata et usque ad exitum mortis coangustata, frendens dentibus gemitum lacrimabilem emittebat. Supradictus vero vir de amara morte nihil dubitans ad monasterium nostrum profiscens, vocavit ad se sanctum Cudberhtum, indicans ei uxorem suam pene usque ad mortem infirmantem, non quae calamitas esset insaniae revelavit. Iam enim erubescebat illam olim religiosam, tamen a demonio vexatam indicare. Nesciebat etiam nec intellegens, quod talis temptatio frequenter Christianis accidere solet ...

Tunc vero preparavit se homo Dei, et omnes simul portati sunt equis, et videns socium suum flentem et lacrimantem duobus causis, hoc est pro moriente uxore sibi deserto et orbanis relictis, et maxime pro ignominiosa insaniae, in qua horribiliter redactam et inpudente confractam et salliva pollutam, olim iam pudicam et castam ...

Igitur pervenerunt sicut diximus, homo Dei ad villam, et mulier, quasi de somno surgens venit in obviam, et primo tacto freni plene pulsato demone sanitati pristine reddita, ut illa cum gratiarum actione testata est ministravit illis.

16. Vita sancti Cuthberti prosaica auctore Beda, ch. 15, in Colgrave, op.cit.

Cunque agerent iter coepit flere homo ... Timebat enim ne cum eam demoniosam inveniret, arbitrari inciperet, quia non integra Domino, sed ficta fide seruisset. Quem vir Domini blande consolatus, Noli inquit plorare quasi inventurus sim coniugem tuam qualem non velim. Scio enim ipse quamvis te dicere pudeat, quia demonio vexatur ... Neque enim tali tormento soli subiciuntur mali, sed occulto Dei iudicio aliquotiens etiam innocentes in hoc saeculo non tantum corpore sed et mente captivantur a diabolo.

17. William of Malmesbury, Vita Wulfstani II, 4, ed. Darlington op.cit.

Erat enim eius provincie incola femina; cui non inops substantia, familiares lares impleverat; sed nequam spiritus mentem prudentia vacavarat. Et paulatim quidem desipientem pertemptans aditum; procedente tempore dementiam extremam intraverat. Iamque ad hoc miserie processerat; ut relictis parentum affectibus, affinium necessitudinibus per devia camporum vel quo eam tulisset impetus vagaretur. Hoc parentes qui cetera moleste vidissent, non ferendum rati; comprehensam vinculis innexuerunt. Nimium id dure; dixerit aliquis. Sed enim severitatem secuta est misericordia: et quo maior erat miseria; maiora venabantur remedia. Conducti medici; qui noto artificio morbum fugarent.Adducti presbiteri; qui salubri exorcismo animum revocarent. Inter quos prior Eveshammensis, qui Colemanno huiusce rei fuit testis et index; sicut ceteri, spem suam frustratus abscessit. Nam utrique et medici et clerici, omnibus conatibus consumptis; illi anti-dota isti exorcismos, ventis exposuerunt. Verumptamen cognatis non parvo res constitit; quin fortunas suas magno inpensarum emungerent dispendio. Inopes ergo spei, exules consilii; ad priorem de quo predixi revertuntur. Eum quia bone vite hominem nossent; quid opus sit facto consulunt. Siquid spei reliquum sciret ediceret; facturis procul dubio, nisi vires suas excederet. Ille librato consilio; exhibendam censet Wulstano episcopo. Fidere se itemque illos debere; quod nulla valitudo ante illum auderet subsistere; qui se gauderet creatoris sui iussis subicere. Dicto probato, ad episcopum perrectum; nec difficulter quod optabatur impetratum. Mox enim ut mulierem vidit; miserie pacientis medullitus indoluit. Calamitatis inmanitas evocavit planctum; planctus

invenit remedium. Protenta ergo manu benedictione; femina impertivit; nescio quid arcane orationis immurmurans. Nulla in medio mora. Statim resumpsit egrota sensum, statim sapuit sanum; affines cognovit, episcopum benedixit. Ipse divinum munus, verbis salutaribus prosecutus est, Iret cum pace domum; benediceret non Wlstanum sed deum. Virtutes amaret; vitiis modum poneret. Pudiciam non perderet; ne deterius aliquid ei contingeret. Nec potuerunt esse ieiuna predicationis semina, que tam peritus seuit agricola. Mulier enim post modicum sanctimonialis accepit velum; tota vita dei preceptis post habuit seculum.

18. Simeon of Durham, Historia Regum in T. Arnold, Symeonis monachi opera omnia (1885) Vol. II p. 188

Normannis Angliam vastantibus, in Northimbria et in quibusdam aliis provinciis anno praecedenti, sed praesenti et subsequenti fere per totam Angliam, maxime per Northymbrian, et per contiguas illi provincias, adeo fames praevaluit, ut homines humanas, equinas, caninas, et catinas carnes, et quicquid usus abhorret, cogente inedia comederent, alii vero in servitutem perpetuam sese venderent, dummodo qualitercumque miserabilem vitam sustentarent, alii extra patriam profecturi in exilium, medio itinere deficientes, animas emiserunt. Erat horror ad intuendum per domos, plateas, et itinera cadavera humana dissolvi, et tabescentia putredine cum foetore horrendo scaturire vermibus. Neque enim supererat qui ea humo cooperiret, omnibus vel extinctis gladio et fame, vel propter famem paternum solum relinquentibus. Interea ita terra cultore destitua, lata ubique solitudo patebat per novem annos. Inter Eboracum et Dunelmum nusquam villa inhabitata; bestiarum tantum et latronum latibula magno itinerantibus fuere timori.

Bibliography of Works Consulted

Primary Sources

Adamnan's Life of St. Columba ed. A.O. and M.O. Anderson (1961)

Aelfric, Homilies, ed. B. Thorpe (1843-6)

Aelfric, Lives of the Saints 2 vols, ed. W.W. Skeat, E.E.T.S. (1881-1900)

Aelfric, Life of St. Ethelwold, in J. Stevenson, Chronicon monasterii de Abingdon (Rolls series, 1858)

Alcuini Opera, P.L., c, ed. J.P. Migne (Paris, 1863)

Alfred's Version of Gregory's Pastoral Care, ed. H. Sweet, E.E.T.S. (1871)

King Alfred's Old English Version of St. Augustine's Soliloquies, ed. H.L. Hargrove (Yale Studies in English xxii, 1904)

Anglo-Saxon Chronicle, trans. G.N. Garmonsway, Everyman, (1953)

Attenborough F.L., Laws of the earliest English Kings (1922)

Asser's Life of King Alfred, ed. W.H. Stevenson (Oxford, 1904)

Bald's Leechbook, ed. C.E. Wright. Early English Manuscripts in facsimile 15, (Copenhagen, 1955)

Barlow F., The Life of King Edward the Confessor (1962)

Beccaria A., I codici di medicina del periodo presalernitano (Rome, 1956)

Bede's Ecclesiastical History of the English People, ed. B. Colgrave and R.A.B. Mynors (Oxford, 1969)

Bedae Opera de Temporibus ed. C.W. Jones (Cambridge, Mass., 1943)

Bedae Opera Historica ed. C. Plummer, 2 vols. (Oxford, 1896)

The Old English Version of Bede's Ecclesiastical History of the English People, ed. T. Miller, E.E.T.S. (1890)

Blickling Homilies, ed. R. Morris E.E.T.S. (1880)

Boniface, The Letters of St. Boniface trans. E. Emerton (Columbia, 1940)

Byrhtferth's Manual ed. S.J. Crawford E.E.T.S. (1929)

Cockayne T.O., Leechdoms, wortcunning and starcraft of early England 3 vols. (Rolls series, 1864-6)

Colgrave, B., Two Lives of St. Cuthbert (Cambridge, 1940)

De Vriend H.J., The Old English Medicina de Quadrupedibus (1972) Tilburg

Eddius Stephanus' Life of Bishop Wilfrid, ed. B. Colgrave (Cambridge, 1927)

(Harmondsworth,) Einhard: Life of Charlemagne in Two Lives of Charlemagne trans. Lewis Thorpe (1969)

(Cambridge,) Felix's Life of St. Guthlac ed B. Colgrave (1956)

Grattan J.H.G. + Singer C.J., Anglo-Saxon magic and medicine (1952)

(Oxford,) Gregory of Tours, History of the Franks, trans. O.M. Dalton 2 vols. (1927)

relating to Great Britain and Ireland (Oxford,) Haddan A.W. and Stubbs W., Councils and ecclesiastical documents. Vol. III (1871)

Hermann, De miraculis sancti Eadmundi in Memorials of St. Edmund's Abbey, ed. T. Arnold (1896)

"Isidore of Seville: the medical writings", trans. W.D. Sharpe, Transactions of the American Philosophical Society 54 pt. 2 (1964)

(Oxford,) Ker N., Catalogue of manuscripts containing Anglo-Saxon (1957)

Logeman H., The rule of St. Benet, E.E.T.S. (1888)

(New York,) McNeill J. + Gamer H.M., Medieval handbooks of penance (1938)

(Cambridge,) Robertson A.J., The Laws of the Kings of England from Edmund to Henry I (1925)

(Cambridge,) Robertson A.J., Anglo-Saxon Charters (1939)

Sawyer P.H., Anglo-Saxon charters: an annotated list and bibliography (1968)

Rolls series Simeon of Durham, Historia Regum in Symeonis Monachi Opera omnia ed. T. Arnold (1885)

(Oxford,) Stevenson W.H., Early scholastic colloquies (1929)

Vol II Snorri Sturluson, Heimskringla: Sagas of the Norse Kings, rev P. Foote (1961)

Symons T., Regularis Concordia (1953)

Talbot C.H., The Anglo-Saxon missionaries in Germany (1954)

2 vols. Thorpe B., Ancient Laws and Institutes of England (1840)

(Pittsburgh,) Walahfrid Strabo: Hortulus trans. R. Payne (1966)

(Oxford,) Warren F.E., The Leofric Missal (1883)

(Cambridge,) Whitelock D., Anglo-Saxon Wills (1930)

c500-1042,) Whitelock D., English Historical Documents Vol. 1 (1955)

Rolls series William of Malmesbury, De Gestis Regum Anglorum, ed. W. Stubbs (1887)

William of Malmesbury, Vita Wulfstani ed. R.R. Darlington, Royal Historical Society (1928)

William of Malmesbury's Life of Wulfstan trans. J.H.F. Peile (Oxford, 1934)

Wright T. and Wülcker R.P., Anglo-Saxon and Old English vocabularies, 2 vols. (1902)

Secondary Sources

(Baltimore,) Ackernecht E., Medicine and Ethnology (1971)

(Budapest,) Acsadi Gy. and Nemeskeri J., History of human lifespan and mortality (1970)

Addyman P.V., "A dark-age settlement at Maxey, Northants", Medieval Archaeology 8 (1964) 20-73

Akerman J.Y., "An account of excavations in an Anglo-Saxon burial ground at Harnham Hill, near Salisbury", Archaeologia 35 (1853) 259-79

Akerman J.Y., "Report on researches in an Anglo-Saxon cemetery at Loup Wittenham, Berks. in 1859", Archaeologia 38 (1860) 327-52

Antonovsky A., "Social class, life expectancy and overall mortality" Millbank Memorial Fund Quarterly 45 (1967) 31-73

Arbesmann R., "The concept of Christus medicus in St. Augustine", Traditio 10 (1954) 1-28

Barley N., "Anglo-Saxon magico-medicine", Journal of the Anthropological Society of Oxford 3 (1972) 67-76

Bautier R-H., The Economic Development of Medieval Europe (1971)

Bonser W., The Medical Background of Anglo-Saxon England (1963)

Bonser W., "Anglo-Saxon medical nomenclature", English and Germanic Studies 4 (1952) 13-19

Bonser W., "The dissimilarity of Irish magic from that of the Anglo-Saxons", Folklore 37 (1926) 271-288

Bovill E.W., The Golden Trade of the Moors (2nd ed. 1970)

Brash J.C., Layard D., and Young M., "The Anglo-Saxon skulls from Bidford-on-Avon, Warwickshire, and Burwell, Cambs., with a comparison of their principal characters and those of the Anglo-Saxon skulls in London museums", Biometrika 27 (1935) 373-408

Brothwell D.R., "Evidence of leprosy in British archaeological material", Medical History 2 (1958) 287-91

Brothwell D.R., "Teeth in earlier human populations", Proceedings of the Nutritional Society 18 (1959) 59-64

Brothwell D.R., "A possible case of mongolism in a Saxon population", Annals of Human Genetics 24 (1960) 141-9

Brothwell D.R., Digging up Bones (1963)

Brothwell D.R., "The paleopathology of early British man", Journal of Royal Anthropological Institute 91 (1961) 318-44

Brothwell D.R. and Møller-Christensen V., "Medico-historical aspects of a very early case of mutilation", Danish Medieval Bulletin 10 (1963) 21-25

Brothwell D.R. and Sandison A.T., Diseases in Antiquity (Springfield, 1967)

Brothwell D.R. ed. The skeletal biology of earlier human populations (Oxford, 1968)

Brothwell D.R. "Palaodemography", p. 111-130 in Biological Aspects of Demography (1971) ed. W. Brass

Brothwell D.R., "Palaeodemography and earlier British populations", World Archaeology 4 (1972) p. 75-87

Brothwell D.R. + Krzanowski W., "Evidence of biological differences between early British populations from Neolithic to Mediaeval times, as revealed by eleven commonly available cranial vault measurements", Journal of Archaeological Science 1 (1974) 249-60

Bugyi B., "About the transversal sclerotic lines of the long bones of the extremities", Anthropologie 11 (1973) 101-104

Buxton L.H., "Excavations at Frilford", Antiquaries Journal 1 (1921) 87-97

Chadwick, S.E. "The Anglo-Saxon cemetery at Finglesham, Kent: a reconsideration", Medieval Archaeology 2 (1958) 1-71

Charcot J.M., Lectures on the diseases of the nervous system (New Sydenham Society 1877)

Clapham A.R., Tutin T.G. and Warburg E.F., Flora of the British Isles (2nd ed. Cambridge, 1962)

Claridge G., Drugs and human behaviour (1970)

Clark J.W., Observances in Use at the Augustinian Priory at Barnwell (1897) Cambridge,

Clay R.C.C., "A pagan Saxon cemetery at Broadchalke", Wiltshire Archaeological Magazine 43 (1925) 94-101

Cockburn A., Infectious diseases: their evolution and eradication (Baltimore, 1967)

Cook J.M., "An Anglo-Saxon cemetery at Broadway Hill, Broadway, Worcs." Antiquaries Journal 38 (1958) 58-84

Corney A., Ashbee P., Evison V.I., Brothwell D.R., "A prehistoric and Anglo-Saxon burial ground at Ports Down, Portsmouth", Proceedings of the Hampshire Field Club and Archaeological Society 24 (1967) 20-41

Creighton C., A history of epidemics in Britain 2 vols. (1891)

Davies R.W., "Some Roman medicine" Medical History 14 (1970) 101-6

Davies R.W., "The Roman Military Diet", Britannia 2 (1971) 122-42

De Moulin D., De Heelkunde in de Vroege middeleeuwen (1964)

De Navarro J.M., "A doctor's grave of the Middle La Tène period from Bavaria", Proceedings of the Prehistoric Society 21 (1955) 231-48

Drummond J.C. and Wilbraham A., The Englishman's Food Revised edition (1957)

Duckett E.S., Anglo-Saxon saints and scholars (New York, 1947)

Dunning G.C., Wheeler R.E.M., and Dingwall D., "A barrow at Dunstable, Bedfordshire", Archaeological Journal 88 (1931) 193-217

Earle, J. English Plant Names from the Tenth to the Fifteenth Century (1880)

Ellacombe H.N., "Plant names one thousand years ago" Gardener's Chronicle Nov 3 (1883) 502-3

Emery G.T., "Dental pathology and archaeology" Antiquity 37 (1963) 274-81

Evison V.I., "An Anglo-Saxon cemetery at Holborough, Kent" Archaeologia Cantiana 70 (1956) 84-116

Fairbairn J.W., "The anthracene derivatives of medicinal plants", Lloydia 27 (1964) 79-87

Finberg H.P.R., The Agrarian History of England and Wales Vol.I, ii (Cambridge, 1972)

Finot, A., "Les médecins des rois Mérovingiens et Carlovingiens", Histoires Sciences Médicales 1 (1970) 41-48

Fleetwood, J., History of medicine in Ireland (Dublin, 1951)

Flück, H., Medicinal Plants (1976)

Forbes T.R., The Midwife and the Witch (New Haven, 1966)

Frazer W., "Description of a great supulchral mound at Aylesbury road near Donnybrook ... referable to the 10 or 11 cs.", Proceedings of the Royal Irish Academy NS 11 Vol. 2 (1879) 29-55

Gale, A.H., Epidemic diseases (1959)

Garrison F.H., An introduction to the history of medicine (Philadelphia, 1929)

Glass D.V. and Revelle R., Population and Social Change (1972)

Goldstein M.S., "Human palaeopathology and some diseases in living primitive societies: a review of the recent literature", American Journal of Physical Anthropology 31 (1969) 285-94

(Oxford,) Goulburn E.M. and Symonds H., The Life, Letters and Sermons of Bishop Herbert of Losinga (1878)

Greulich W.W. and Pyle S.I., Radiographic Atlas of skeletal development of hand and wrist (2nd ed. 1959) Stanford, Calif.

Grieve M., A Modern Herbal (1931) (1976 reprint)

Griffith A.F. and Salzmann L.F.,"An Anglo-Saxon cemetery at Alfriston, Sussex", Sussex Archaeological Collections 56 (1914) 16-53

(St. Albans,) Grigson, Geoffrey, The Englishman's Flora (1975)

Grube F.W., "Cereal foods of the Anglo-Saxons", Philological Quarterly 13 (1934) 140-58

Hallam H.E., "Some thirteenth century censuses", Economic History Review 10 (1958) 340-61

Hardwick J.L., "The incidence and distribution of caries throughout the ages in relation to the Englishman's diet", British Dental Journal 108 (1960) 9

Hare, R., Pomp and pestilence (1954)

(New York,) Harris B.C., The Compleat Herbal (1972)

Hinshaw R., Pyeatt P., Habicht J-P., "Environmental effects on child-spacing and population increase in Highland Guatemala", Current Anthropology 13 (1972) 216-30

Horne, D.E., "A Saxon cemetery at Camerton, Somerset", Proceedings of the Somerset Archaeology and Natural History Society 74 (1928) 61-70

Horton-Smith, R.J., "Cranial characteristics of the South Saxons compared with those of some of the other races of South Britain", Journal of the Anthropological Institute 26 (1897) 82-102

(Newton Abbot,) Howe G.M., Man, environment and disease in Britain (1972)

Humphreys J. et al, "An Anglo-Saxon cemetery at Bidford-on-Avon, Warwickshire", Archaeologia 73 (1922-23) 89-116

Hunter D., The diseases of occupations (2nd ed. 1958)

Hutchinson P., "The Anglo-Saxon cemetery at Little Eriswell, Suffolk", Proceedings of the Cambridge Antiquarian Society 59 (1966) 1-32

Jannsens, P.A., Palaeopathology (1970)

(Copenhagen,) Jessen K. and Helbaek H., Cereals in Gt. Britain and Ireland in prehistoric and early historic times (1944)

Joechle W., "Menses inducing drugs: their role in antique, medieval and renaissance gynaecology and birth control", Contraception 10 (1974) 425-39

Jones I.B., "Popular medical knowledge in fourteenth century English literature", Bulletin of the History of Medicine 5 (1937) 405-51

Kadar Z., "Some notes on the common archetypes of pharmaco-zoological illustrations in the MS Cotton Vitellius Ciii...", Orvostorteneti Kozlemenyek 1972 (suppl. 6) 85-95

Kellermann G., "Methodological Investigations on the ABO-typing of ancient bones", Humangenetik 14 (1971)51-55

Kenyon K.M., "Excavations at Breedon-on-the Hill 1946", Transactions of the Leicestershire Archaeological Society 26 (1950) 17-82

Knocker G.M., "Early burials and an Anglo-Saxon cemetery at Snell's Corner, nr. Horndean, Hants.", Proceedings of the Hampshire Field Club and Archaeological Society 19 (pt.2) (1956) 117-70

Knocker G.M., "Excavations at Framlingham Castle 1954", Proceedings of the Suffolk Institute of Archaeology 27 pt. 2 (1956) 64-85

Knocker G.M., "Excavations at Red Castle, Thetford", Norfolk Archaedogy 34 (1967) 119-86

Kreig M.B., Green medicine: the search for plants that heal (1965)

Krey A.C., "Medicine and surgery AD 600-1600; the rebirth of the medical profession in Western Europe", Surgery 37 (1955) 298-316

Kristeller P.O., "The school of Salerno", Bulletin of the History of Medicine 17 (1945) 138-94

Laistner M.L.W., "Was Bede the author of a penetential?", p. 165-177 in The Intellectual Heritage of the Early Middle Ages (1957)

(Oxford,) Lawn B., The Salernitan Questions (1963)

Leeds E.T., "Two Saxon cemeteries in N. Oxfordshire", Oxoniensia 5 (1940) 21-30

Leeds E.T. + Riley M., "Two early Saxon cemeteries at Cassington, Oxon.", Oxoniensia 7 (1942) 62-70

Leeds E.T. and Shortt H. de S., An Anglo-Saxon cemetery at Petersfinger, Nr. Salisbury, Wilts. (1953)

(Cambridge,) Lethbridge T.C., Recent Excavations in Anglo-Saxon cemeteries in Cambridgeshire and Suffolk, Camb. Antiq. Soc. Pubs. New series III (1931)

(Cambridge,) Lethbridge T.C., A cemetery at Shudy Camps, Cambridgeshire (Camb. Antiq. Soc. Quarto Publics. NS V (1936))

(Cambridge,) Lethbridge T.C., "Anglo-Saxon burials at Soham, Cambridgeshire", Proceedings of the Cambridge Antiquarian Society 33 (1931) 152-63

Longden J., "Statistical notes on Winchester heriots", Economic History Review 11 (1959) 412-14

Loyn H.R., Anglo-Saxon England and the Norman Conquest (1962)

Loyn H.R. and Percival J., The reign of Charlemagne (1975)

MacArthur W.P., "The identification of some pestilences recorded in the Irish annals", Irish Historical Studies 6 (1949) 169-88

MacArthur W.P., "The pestilence called 'scamach'", Irish Historical Studies 7 (1951) 199-200

MacArthur W.P., "Famine fevers in England and Ireland: the Yellow Pestilence, pestis flava, or buidhe chonaill", Journal of the British Archaeological Association 3 series 9 (1944) 66-71

MacArthur W.P., "Some notes on old time leprosy in England and Ireland", Journal of Royal Army Medical Corps 45 (1925) 410-422

MacArthur W.P., "Comments on Shrewsbury's 'Yellow Plague'", Journal of the History of Medicine 5 (1950) 214-15

MacArthur W.P., "Medieval 'Leprosy' in the British Isles", Leprosy Review 24 (1953) 8

MacArthur W.P., "Old time plague in Britain ", Transactions of the Royal Society of Tropical Medicine and Hygiene 19 (1926) 355-71

McHenry, H., "Transverse lines in long bones of Prehistoric California Indians", American Journal of Physical Anthropology 29 (1968) 1-18

MacKinney L., Medical illustrations in medieval manuscripts (1965)

MacKinney L.C., "Medical ethics and etiquette in the early middle ages: the persistence of Hippocratic ideals", Bulletin of the History of Medicine 26 (1952) 1-31

MacKinney L., "Medical Education in the Middle Ages", Journal of World History 2 (1955) 835-61

MacKinney L., "Tenth century medicine: classicism and pragmatism", Medievalia et humanistica 8 (1955) 10-13

MacKinney L., "Medieval surgery", Journal of the International College of Surgeons 27 (1957) 393-404

MacKinney L.C., "Tranquillisers before the modern era", Chemist and Druggist (Special Issue) June 1960, 766-71

MacKinney L., "Childbirth in the Middle Ages, as seen in Manuscript Illustrations"Ciba Symposium 8 no. 5/6 (1960) 230-36

Maclean U., Magical medicine: A Nigerian Case Study (1971)

Matthews C.L., "The Anglo-Saxon cemetery at Marina Drive, Dunstable", Bedfordshire Archaeological Journal 1 (1962) 25-47

Matthews C.L., "Saxon remains on Puddlehill, Dunstable", Bedfordshire Archaeological Journal 1 (1962) 48-57

Matthews L.G., History of Pharmacy in Britain (Edinburgh, 1962)

Miles A.E.W., "Assessment of the ages of a population of Anglo-Saxons from their dentitions", Proceedings of the Royal Society of Medicine 55 (1962) 881-6

Miles A.E.W., "The dentition of the Anglo-Saxons", Proceedings of the Royal Society of Medicine 62 (1969) 1311-1315

Miles A.E.W., "Some morbid skeletal changes in Anglo-Saxons", British Dental Journal 133 (1972) 309-11

Møller-Christensen V., "New knowledge of leprosy through palaeopatholgy", International Journal of Leprosy 33 (1965) 603-10

Møller-Christensen V., and Hughes D.R., "Two early cases of leprosy in Great Britain", Man 62 (1962) 177-79

Moore W.J. + Corbett M.E., "The distribution of dental caries in Ancient British populations. 1. Anglo-Saxon period", Caries Research 5 (1971) 151-68

Morant G.M., "A first study of the craniology of England and Scotland from Neolithic to early historic times, with special reference to the Anglo-Saxon skulls in London museums", Biometrika 18 (1926) 56-98

Nutton V., "Prognostica Galieni", Medical History 14 (1970) 96-100

Ogilvy J.D.A., Books known to the English 597-1066 (Cambridge, Mass. 1967)

Ohlin G., "No safety in numbers: some pitfalls of historical statistics", p. 68-90 in Industrialisation in two systems ed. H. Rosovsky (New York, 1966)

Orwin C.S., The Open Fields (2nd ed. Oxford, 1954)

Page R., Life in Anglo-Saxon England (1970)

Payne, J.F., English medicine in the Anglo-Saxon times (Oxford, 1904)

Peake H. and Hootton E.A., "Saxon graveyard at East Shefford, Berks.", Journal of the Royal Anthropological Institute 45 (1915) 92-130

Picton D.C.A., "Calculus, wear and alveolar bone loss in the jaws of 6 c. Jutes", Dental Practitioner 7 (1957) 301-3

Plummer S., "St. Cuthbert. Notes on the examination of his remains, March 1899", Northumberland and Durham Medical Journal 7 (1899) 231-45

Polgar, S., "Population history and population policies from an anthropological perspective", Current Anthropology 13 (1972) 203-11

Post J.B., "Ages at menarche and menopause: some medieval authorities", Population Studies 25 (1971) 83-7

Postan M.M., The Medieval Economy and Society (1975)

Postan M.M. and Titow J., "Heriots and prices on Winchester manors", Economic History Review 11 (1959) 392-411

Powicke F.M. and Fryde E.G., Handbook of British Chronology, Royal Historical Society (2nd edit. 1961)

Rackham J., "Rattus rattus (Linaeus 1758): some recent finds suggesting a Roman date for the introduction of the black rat into Britain" (forthcoming)

Ranson F., British Herbs (1949)

Riddle J.M., "The Introduction and Use of Eastern Drugs in the early Middle Ages", Sudhoff's Archive 49 (1965) 185-198

Riddle J.M., "Theory and practice in medieval medicine", Viator 5 (1974) 157-184

(Manchester, \ Roberts R., The Classic Slum \ 1971)

Rohde E.S., The Old English Herbals (1922)

Rubin S., "Compensation for Injury in Anglo-Saxon law", Yorkshire Faculty Journal Autumn (1969) 35-51

Rubin S., "The medical practitioner in Anglo-Saxon England", Journal of the Royal College of General Practioners , 20 (1970) 63-71

(Newton Abbot, \ Rubin S., Medieval English Medicine \ 1974)

(Albuquerque, \ Russell J.C., British Medieval Population \ 1948)

Russell J.C., "The preplague population of England", Journal of British Studies V, 2 (1966) 1-21

Russell J.C., "Population in Europe 500-1500", pp. 25-70 in The Fontana Economic History of Europe: the Middle Ages (1972) ed. C.M. Cipolla

Sayce R.U., "Need years and need foods", Montgomery College 53 (1953-4) 55-80

Schenk G., The Book of Poisons (1956)

Schultes R.E., "The plant kingdom and modern medicine", Herbalist No. 34 (1968) 18-26

Schwager P.M., "The frequency of appearance of transverse lines in the tibia in relation to childhood illness", American Journal of Physical Anthropology 29 (1968) 130

(Cambridge, \ Searle W.G., Anglo-Saxon bishops, kings and nobles \ 1899)

(Cambridge, \ Shrewsbury J.F.D., A history of Bubonic Plague in the British Isles \ 1970)

Shrewsbury J.F.D., "The Yellow Plague", Journal of the History of Medicine 4 (1949) 5-48

Singer C., "A review of the medical literature of the Dark Ages", Proceedings of the Royal Society of Medicine (1917) x pt. II, 107-60

Singer C.J.,"The herbal in antiquity", Journal of Hellenic Studies (1927)1-52

Singer C. and D., "An unrecognised Anglo-Saxon text", Annals of Medical History 3 (1921) 136-49

Smyth K.C., "Some notes on the dentitions of Anglo-Saxon skulls from Bidford-on-Avon, with special reference to malocclusion", Transactions of the British Society for Studies in Orthodontics (1933) 1-21

Stewart T.D., "Distortion of the pubic symphyseal surface in females and its effect on age determination", American Journal of Physical Anthropology 15 (1957) 9-18

Stone J.F.S., "Saxon interments on Roche Court Down, Winterslow", Wiltshire Archaeological Magazine 45 (1930-32) 568-599

Stowell T.E.A., "The Bones of Edward the Martyr", The Criminologist (1970) 97-119

Swain T., ed. Plants in the development of modern medicine (Cambridge, Mass., 1972)

Talbot C.H., Medicine in Medieval England (1967)

Talbot C.H., "Some notes on Anglo-Saxon Medicine", Medical History 9 (1965), 156-169

Talbot C.H. and Hammond E.A.,The medical practitioners in Medieval England (1965)

Tattersall I., "Dental paleopathology of medieval Britain", Journal of the History of Medicine 23 (1968) 380-5

Thackrah C.T., The effects of arts, trades and professions and of civic states and habits of living on health and longevity ... 2nd ed. 1832

Thompson W.A.R., Herbs that heal (1976)

Trotter M. and Gleser G.C., "Estimation of stature from longbones of American whites and negroes", American Journal of Physical Anthropology NS10 (1952) 463-514

Trotter M. and Gleser G.C., "A re-evaluation of estimation of stature based on measurements of stature taken during life and of long bones after death", American Journal of Physical Anthropology 16 (1958) 78-123

United Nations Dept. of Social Affairs, Population Branch, Report No. 25, Methods for Population Projection by Sex and Age (New York, 1956)

Van Zeller H., The holy rule (1958)

(Chicago,) Veith I., Hysteria: the history of a disease (1965)

Warhurst A., "The Jutish cemetery at Lyminge", Archaeologia Cantiana 69 (1955) 1-41

Waugh W.G., "Osteoarthritis and occupation", British Medical Journal 2 (1950) p. 948

Weiss D.L. and Moller-Christensen, "Leprosy, echinococcosis and amulets: a study of a medieval Danish inhumation", Medical History 15 (1971) 260-67

Wells L.H., "A survey of human remains from longcist burials in the Lothians", Proceedings of the Society of Antiquaries of Scotland 90 (1957) 180-91

Wells C., "A study of cremation", Antiquity 34 (1960) 29-37

Wells C., "A new approach to ancient disease", Discovery 22 (1961) 526-31

Wells C., "Three cases of aural pathology of Anglo-Saxon date", Journal of Laryngology and Otology 76 (1962) 931-33

Wells C., "Joint pathology in ancient Anglo-Saxons", Journal of Bone and Joint Surgery 44B (1962) 948-9

Wells C., "A possible case of leprosy from a Saxon cemetery at Beckford", Medical History 6 (1962) 383-85

Wells C., "Hip disease in ancient man", Journal of Bone and Joint Surgery 45B (1963) 790-1

Wells C., "Polyostotic fibrous dysplasia in a seventh century Anglo-Saxon", British Journal of Radiology 36 (1963) 925-26

Wells C., "The Human Skeleton", p. 329-333 App. in "Some Suffolk Kilns: iv. Saxon kilns in Cox Lane, Ipswich 1961", Norman Smedley + Eliz. J. Owles, Proceedings of the Suffolk Institute of Archaeology 29 (1963)

Wells C., Bones, bodies and disease (1964)

Wells C., "Four cases of archaic disease of the orbit", E.E.N.T. Digest 26 (1964) 63-68

Wells C., "The study of ancient disease", Surgo 32 (1964) 3-7

Wells C., "The radiography of ancient bones", X ray focus (1964) 2-5

Wells C., "A pathological Anglo-Saxon femur", British Journal of Radiology 38 (1965) 393-4

Wells C., "Diseases of the knee in Anglo-Saxons", Medical and Biological Illustration 15 (1965) 100-107

Wells C., "Osteogenesis imperfecta from an Anglo-Saxon burial ground at Burgh Castle, Suffolk", Medical History 9 (1965) 88-89

Wells C., "Weaver, tailor or shoemaker?", Medical and Biological Illustration 17 (1967) 39-47

Wells C., "Ancient evidence of disease", M & B Pharmaceutical Bulletin 16 Nov/Dec 1967, 3-6

Wells C., "Osgood-Schlatter's disease in the ninth century?", British Medical Journal pt. ii (1968) 623-4

Wells C., "Ancient arthritis", M & B Pharmaceutical Bulletin Dec. 1972

Wells C., "Probable trephination of five Early Saxon skulls", Antiquity 48 (1974) 298-302

Wells C., "Osteochondritis dissecans in ancient British skeletal material", Medical History 18 (1974) 365-69

Wells C., + Green C., "Sunrise dating of death and burial", Norfolk Archaeology 35 (1974) 435-42

Wells C., "Ancient obstetric hazards and female mortality", Bulletin of the New York Academy of Medicine 51 (1975) 1235-1249

Wells C., "Une fracture rare chez un ancien Anglo-Saxon", Helinium 15 (1975) 237-43

Wells C., + Woodhouse N., "Paget's Disease in an Anglo-Saxon", Medical History 19 (1975) 396-400

Wells C., "Prehistoric and historical changes in nutritional diseases and associated conditions", Progress in Food and Nutritional Science 1 (1975) 729-799

Wenham L.P., The Romano-British Cemetery at Trentholme Drive, York (1968)

Whitelock D., "Wulfstan and the so-called Laws of Edward and Guthrum", English Historical Review 56 (1941) 1-21

Whitelock D., The beginnings of English society (1952)

Reading, Whitelock D., The Genuine Asser (The Stenton lecture 1967)

Willis R., "Description of the ancient plan of the monastery of St. Gall in the ninth century", Archaeological Journal 5 (1848) 85-117

Wilson D.M., "The initial excavation of an Anglo-Saxon cemetery at Melbourn, Cambs.", Proceedings of the Cambridgeshire Antiquarian Society 49 (1955) 29-40

Wilson D.M. ed., The Archaeology of Anglo-Saxon England (1976)

Wormald F., English Kalendars before AD 1100 (Henry Bradshaw Society 1933)

Wrigley E.A., Population and History (1969)

Zinsser H., Rats, lice and history (1942)